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Consumers' Research Bulletin



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CONSUMERS' RESEARCH



Vol. 26 • No. 3

BULLETIN

September 1950

Off the Editor's Chest

IN the course of the next few months consumers will be subjected to a great deal of campaign oratory about the evils of monopoly in business. It is an issue that is regularly dusted off and trotted out. Like the man-eating shark, monopoly has no friends, and denouncing it vigorously is considered a better political technique than kissing babies, although nowadays it does not have quite the interest-raising quality that it possessed back in the Teddy Roosevelt era.

In recent years business monopoly has been the favorite target of several agencies of the federal government, which, in the course of their various proceedings, have apparently evolved the theory that a few large and successful operators in any particular field are *likely* to dominate the industry and breed monopoly. The corollary is that what the federal government is pleased to regard as proper competition requires the existence of a considerable number of small companies, no one of which is big enough or influential enough to control the market. In the case of The Great Atlantic & Pacific Tea Company, for example, the government is seeking to break the chain up into seven separate units, partly because it failed to *mark up prices* the "normal" amount above its costs. Since the A. & P.'s share of the total grocery business was

only about 6½ percent in 1949, it is obvious that it was not a monopoly as most people would understand the term. The conclusion is being drawn by many that the government's action was taken, not on behalf of consumers (who stand to gain by A. & P.'s policy of low selling prices), but the small retail grocer who might be hard put to it to compete with the A. & P. on a price basis. The desire of federal agencies to enforce competition seems somewhat hypocritical so long as the Miller-Tydings Act which legalizes the fixing by manufacturers of prices at retail remains on the books. This Act and its numerous state counterparts are designed to protect the small retailer from "cutthroat competition" and "suicidal price cutting."

It has been observed that very commonly the prices set under the so-called "fair trade" laws are fixed at a level that will enable the least efficient retailers to remain in business. Liquor, drugs, cosmetics, and appliances are the items which are generally covered by "fair trade" laws. The extent to which they are effective in preventing the consumer from securing products at competitively low prices when the supply lines are full and when prices should be cut to stimulate consumer purchasing and reduce surplus stocks may be gauged

(Continued on page 23)

Consumers' Research functions to provide unbiased information on goods bought by ultimate consumers. For their benefit (not for business or industry) and solely with the funds they provide, CR carries on tests and research on a wide variety of goods, materials, and appliances, and publishes the findings in CR Bulletin. Consumers' Research is a non-profit institution, and is organized and operates as a scientific, technical, and educational organization. Scientific and Technical Staff and Editors: F. J. Schlink, R. Joyce, Dwight C. Aten, M. C. Phillips, Erma A. Hinck, and A. R. Greenleaf. Editorial Assistants: Mary F. Roberts and B. Beam.

Symbols used to indicate sources of data and bases of ratings: A—recommended on basis of quality; AA—regarded as worthy of highest recommendation; B—intermediate with respect to quality; C—not recommended on basis of quality; cr—information from Consumers' Research's own tests or investigations; I, II, III—relative prices being low, high, very high; Note that price and quality are completely differentiated in CR listing; a quality judgment is based on quality of price.

It will be advantageous if you will, whenever possible, send prompt notice of change of address at least 5 weeks before it is to take effect, accompanying your notice with statement of your old address with name in full. At least a month's notice must be given in any case. This rule, however, regarding long advance notice does not apply to military personnel.

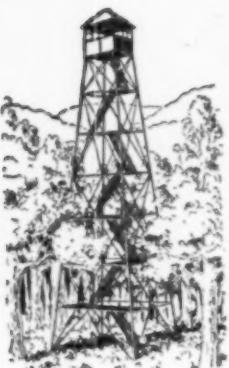
*CR will, of course, gladly change addresses for men and women in the services as often as required by changes in station and other circumstances.

**For a brief cumulative index of 1950 BULLETINS preceding this issue, see page 15.

CONSUMERS' RESEARCH BULLETIN, issued monthly by Consumers' Research, Inc., Publication Office, Box 429, Easton, Pa. Address orders and correspondence to CONSUMERS' RESEARCH, Washington, N.J. Single copy, 85 cents; subscription price (12 issues) \$3 per year, U.S.A., Canada and foreign, \$3.50.

*Responsibility for all specific statements of fact or opinion at any time made by Consumers' Research lies wholly with the technical director and staff of the organization. Entered as second-class matter November 9, 1934, at the Post Office at Washington, N.J., under the Act of March 3, 1879; additional entry at Easton, Pa. Copyright, 1950, by Consumers' Research, Inc., Washington, N.J. •• Printed in U.S.A. •• CONSUMERS' RESEARCH BULLETIN is on file in many school, college, and public libraries and is indexed in Industrial Arts Index and in the Readers' Guide to Periodical Literature. •• Beginning with the 1949 volume, microfilm copies of complete volumes of CONSUMERS' RESEARCH BULLETIN will be available (only to regular subscribers to CR BULLETIN) from University Microfilms, 313 North First St., Ann Arbor, Mich.

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The Consumers' Observation Post

SOMETHING SHOULD BE DONE to make women dissatisfied with their present wardrobes so that they will spend more money on clothes, urges B. Earl Puckett, chairman of the board, Allied Stores Corp. It is Mr. Puckett's idea that apparel merchandisers should create a "new look" in fashion every year and accelerate obsolescence in the "soft lines" businesses, which he feels are now getting too small a portion of consumers' spendable income. He is quoted as saying that women should be made so unhappy with what they have in the way of apparel that their husbands can find no peace in what he calls their "excessive savings." It may have escaped Mr. Puckett's attention, but a lot of women think that present clothing prices are much too high, and that may be the chief reason for their not buying.

TAXES add considerably to the overhead cost of owning an automobile. In the state of Virginia, for example, it has been reliably estimated that the average Virginia car owner will pay \$97 in gasoline and automotive taxes in 1950, an amount that represents an increase of 44 percent over 1940.

CHEMICALS ADDED TO FOOD DURING PROCESSING are increasing in number and are being looked at with a critical eye by public health authorities and legislators. Some chemicals such as monochloracetic acid in soft drinks, beer, and wine, and nitrogen trichloride as a bleaching agent for flour have been condemned as involving possible hazards to health. There are also a number of chemicals being offered to manufacturers about which, one expert points out, little is known. There is still a third group which makes products look better than they are, from the nutritional point of view. Flour, for example, may be treated with diluted nitric acid in order to produce a deep yellow color similar to that of egg yolk, and so improve its usefulness to commercial bakers in the making of fancy breads and cakes.

MAKING GARMENTS OF NYLON FABRICS AT HOME involves the use of certain techniques especially adapted for the use of the new fiber, if successful results are to be achieved. It has been discovered, for example, according to the trade journal Rayon and Synthetic Textiles, that seams sewn across the fabric or on the bias are not so likely to pucker. Simple, single needle seams are less susceptible to puckering than double needle machine stitched seams. The difficulty here is that it is essential to protect raw edges from raveling during washing, and pinking the edge is not sufficient. Single seams will therefore need to be bound or overedged. When sewing nylon fabrics on the sewing machine it is absolutely necessary to maintain low thread tension, particularly if nylon thread is used. Tight thread tension will pucker and ruin many seams.

POPCORN SALES are increasing in certain sections of the country. The head of one company attributes the rise in demand to television, reporting that the housewife who bought an occasional package before, buys three or four cans at a time if she has a television set.

HOW TO BUILD YOUR OWN HOME complete with plumbing and heating is the subject of an interesting little booklet put out by the State College of Washington. The publication is the story of a student couple who built their own home at a cost of something like \$3000. The booklet entitled "Our Answer to Housing," State College of Washington, Pullman, Washington, is well worth its price of 25c.

THE MARKET SURVEYORS are at it again, trading on the prestige of CR's good name. One of our subscribers has sent us a form put out by Consumers Research, Mail Center of Chicago, 216 W. Jackson Blvd., Chicago 6, Ill., which is to be filled out and returned to that address in order "to determine approximately the amounts of various consumer goods that will be sold during the year 1950." On the card are spaces to check whether the recipient has or is planning to buy a television set, electric range, ironer, etc. Since there is no listing for "Consumers Research" in our Chicago telephone book, this may be some temporary setup that will disappear as soon as its current market survey job is completed. One would hardly doubt that the use of CR's name is a deliberate attempt to confuse and mislead people into thinking that the communications came from Consumers' Research, Inc. Subscribers are urged to tell their friends about the misuse of Consumers' Research's name. We have for some time held market surveys in low esteem and this sort of trick way of collecting market data reinforces our opinion that the trade is in real need of a thorough cleaning up and a code of ethics with a firm policing policy.

* * *

EXTRA! EXTRA! An entertaining novelty record in the Spike Jones style is "There's a Hole in the Iron Curtain," by Mickey Katz and His Orchestra, 78 rpm. Capitol Record 5425-Y, 75c (plus tax). The quality of music may be too low-brow for Walter Grueninger's more serious followers, but the sound effects are unusual and interesting and the vocal is reminiscent of the dialect skits of old-time vaudeville days. The pace is fast; sound effects are well recorded, and surface is good. The merry burlesque of the dismay of a commissar who finds Americans are peeking through a hole in the Iron Curtain may afford a refreshing, if momentary, relief from the grimmer aspects of the international political scene.

* * *

COTTON may be in plentiful supply, but farm price supports are making it too expensive for some uses. Rayon, for example, is reported to be taking the place of cotton in automobile tires. Where cotton accounted for about 93 percent of the textiles used in tires in 1941, it was down to around 37 percent in 1949. One tire expert pointed out that, in order to compete with rayon on a price basis, cotton would have to come down from its quoted price of around 32 cents a pound to something like 20 cents. The only reason for using cotton in tires at all, in the opinion of another tire man, is that there is not enough rayon available at present to supply tire manufacturers' needs.

* * *

WHAT TO FEED THE FAMILY DOG to keep him well nourished and happy is something of a problem. Table scraps are frowned upon by the experts as inadequate and nutritionally incomplete. Raw eggs, popularly supposed to be effective in improving a dog's coat, are held to be just so much poison by one authority, who maintains that three raw eggs daily may kill a dog the size of a cocker spaniel because the raw egg white contains avidin which causes a deficiency of the essential vitamin, biotin. Feeding egg shells to provide calcium is also considered undesirable and feeding fish oil to provide vitamins A and D may have serious effects. In short, the best advice is to consult a veterinarian for advice on special feeding problems. For everyday fare, feed the family pet dry dog food; this may be made more appetizing by combining it with table scraps so that the juices soak into the dry pellets or biscuits.

* * *

CLEANING FLUID for removing spots is frequently carbon tetrachloride and it is dangerous when inhaled or ingested. More than 15 years ago, CR warned against use of carbon tetrachloride as a dry shampoo, and called attention to the reports of two cases of illness and a death from such use. Early this year a medical journal carried a detailed discussion of two fatalities and one near fatality due to carbon tetrachloride poisoning, and four cases of industrial poisoning from contact with the fluid. Four cases of death from use of this cleaning fluid were reported in Westchester County, New York, in a six weeks' period ending April 21, 1950. Medical experts recommend that all products containing carbon tetrachloride be clearly labeled, no matter how small the amount present, pointing out that one teaspoonful taken internally may be fatal and the fumes from one cupful in a poorly ventilated place may cause death. The label

(Continuation of this section is on page 29)

Sixteen 1950 Refrigerators

HERE is a definite trend in refrigerator design to have the frozen-food compartment extend the full width of the refrigerator space. Of the 16 refrigerators tested, 10 were of that design. Another trend is for the refrigerated space to extend to within 7 or 8 inches of the floor, requiring a much longer door. The advantage of this, which gives a bigger refrigerated space in proportion to the floor space occupied, is dubious, for unloading and loading the lower shelves will be inconvenient, particularly for older people. Operating costs in cents per cubic foot per month for electricity were found to be on the average slightly lower than for the 1949 models (14.3c against 14.9c). The most efficient refrigerators in the 1950 tests cost 9.8c per cu. ft. per month to operate, compared to 11.2c for the most efficient 1949 refrigerator.

Ratings are comparative as usual. In all probability, refrigerators which have been assigned a *B* or *C* rating will give satisfactory service (with the possible exception of the *Admiral*), but at a relatively higher cost for electricity per month. The *Admiral 960* tested by CR would not perform satisfactorily at temperatures much above normal summer temperatures.

Test Methods

The refrigerators were allowed to stand in a heated room with their doors open until all the parts were at room temperature (110°F). The doors of the boxes were then closed and measurements of the electrical energy consumed were taken at one-half hour intervals until the average

temperature reached a value of 46°F or lower. Curves were plotted from these data, and the time and energy required for the temperature in each box to drop to 46°F determined. This gave a measure of the refrigerating capacity (adequacy of the refrigerating unit to handle its load) of each unit. There was considerable difference in the time required for the various boxes to "pull the temperature down" from 110°F to 46°F (see Table I). The *Sears Coldspot* accomplished this in 2.6 hours, but the *Coolerator* required 6.8 hours. The *Admiral* could not lower the temperature to 46° though 46° or below is required for safe storage of many foods.

After stable temperature conditions were reached, no-load performance data were obtained with several settings of the control dial, the temperature in the test room being maintained in one case at 90°F and in another at 110°F.

By experience it has been learned that the cost of operating a refrigerator loaded with food and used under average conditions in a home will often be close to the operating cost determined under test conditions in a room held accurately and constantly at 80°F. Operating costs at 80°F have been approximately determined by calculation and are given in Table II. If there is a considerable "food load," which implies putting into the refrigerator from time to time foods which are warm or at room temperature, the performance of the refrigerator *at a room temperature of 90°* will more closely approximate the operating cost. It should be noted that the energy consumption between two new samples



Coldspot Model 106.D9P-B1



*Montgomery Ward DeLuxe
Model 05-S-950.1*



Hotpoint Model 12FA8-4

Table I

Table showing time required for the various refrigerators to be "pulled down" in temperature from 110°F (room temperature, outside of box, and inside, at start) to 46°F.¹

	Price	Actual cu. ft. ²	Price per Actual cu. ft.	Number of hours required to reduce temperature to 46°F in "pull-down" test	Hours per cu. ft.
Coldspot 106.D9P-BI	\$230	9.8	\$23.60	2.6	0.27
Philco E-1103	330	11.2	29.40	3.3	0.30
Montgomery Ward 05-S-950A	224 ²	9.4	23.80 ²	2.9	0.31
Westinghouse AA-84	260	8.1	32.10	2.8	0.35
Philco E-904	270	9.2	29.20	3.4	0.36
Hotpoint 12E.18-4	230	8.5	27.10	3.1	0.37
Frigidaire MM-76	235	7.7	30.50	2.8	0.37
Philco F-906	320	10.1	31.50	3.8	0.38
Kelvinator RK-R	250	7.7	32.50	3.1	0.40
Crosley Shelvador UB-9	250	9.5	26.30	4.1	0.43
Norge NF-85	250	8.3	29.90	4.5	0.54
Gibson G-820	260	8.3	31.30	4.5	0.54
Philco E-703	215	7.0	30.70	3.8	0.55
International Harvester H-74	215	7.7	27.90	4.8	0.62
Coolerator RB-75	200	7.7	26.00	6.8	0.88
Admiral 960	230	9.5	24.20	8.5 ¹	—

¹In the case of the *Admiral*, internal temperature, as explained in text, could not be reduced to 46°F even in 8.5 hours' running.

²Plus freight.

³Total, food storage plus frozen-food compartment, cu. ft.

of any given model of electric refrigerator may vary as much as 15 percent, and that a range of variation of 5 to 10 percent is common due to non-uniformity in manufacture.

In the ice-making tests, the time to make the regular complement of ice cubes, with the box in a room at 110°F, was measured.

In the listings, only the time for freezing the *full complement* of ice cubes is given; the time to freeze cubes, of course, varied according to the location of the trays. In the *Montgomery Ward*, for example, cubes in the tray on the top shelf were frozen solid in 4 hours, but in the bottom trays were only half frozen in that time, and were not completely frozen until 5 hours had elapsed. (Anyone requiring a lot of cubes quickly could change the position of the trays and obtain the maximum quantity of cubes in a shorter time.)

All of the electric refrigerators started satisfac-

tory on low voltage (approximately 90% of rated voltage), and the starting current under normal conditions in all except the *Crosley* was below 15 amperes. The *Crosley* required 18.5 amperes, but as this was only for a moment, it would normally operate satisfactorily on a line fused at 15 amperes. All of the motors operated satisfactorily in the overload test (stalling the motor by opening and quickly closing the circuit). In some cases the overload cut-out opened the circuit and later reclosed it automatically, as it should, when the motor had cooled. In this test, the starting current of four of the refrigerators exceeded 15 amperes (*Frigidaire MM-76*, 18 amperes; *Philco 1103*, 17.5 amperes; *Philco 906*, 17.5 amperes; and *Philco 904*, 16.2 amperes).

All of the refrigerators were satisfactorily quiet in operation. Operating costs are shown in Table II, and to save space are not repeated in full in the

Table II

A comparison of monthly operating costs of refrigerators last tested by CR. The electric rate is assumed to be 3½¢ per kWhr. The figures in column 4a are monthly operating costs per cu. ft. of total storage space at 90° room temperature.

	Total Storage Capacity, Cu. Ft., Actual	1	2	3	4	4a	Estimated Monthly Operating Cost at Room Temperatures					
							80°		90°		110°	
							per cu. ft., cents	% running time	per cu. ft., cents	% running time	per cu. ft., cents	% running time
Philco E-1103	11.2	\$0.83	\$1.10	9.8c	19.3	\$2.24	42.3					
Philco E-904	9.2	0.69	0.91	9.8	16.4	1.83	34.5					
Hotpoint 12EA18-4	8.5	0.73	0.97	11.4	26.5	1.84	55.1					
Westinghouse AA-84	8.1	0.71	0.95	11.7	21.0	2.00	46.0					
Montgomery Ward 05-S-950.1	9.4	0.83	1.11	11.8	23.2	2.02	43.5					
Philco E-906	10.1	0.93	1.24	12.2	24.3	2.52	52.5					
Coldspot 106-D9P-B1	9.8	0.93	1.24	12.7	28.8	2.39	48.8					
Frigidaire MM-76	7.7	0.84	1.12	14.5	34.5	1.91	56.0					
Crosley Sheldor UB-9	9.5	1.09	1.45	15.3	36.0	2.29	67.6					
Philco E-703	7.0	0.81	1.08	15.4	24.8	2.23	55.8					
Admiral 960	9.5	1.11	1.48	15.6	47.8	3.57	100.0					
Gibson G-820	8.3	1.02	1.35	16.3	30.0	2.45	59.0					
Kelvinator RK-R	7.7	0.95	1.27	16.5	29.5	2.34	58.2					
Norge SF-85	8.3	1.09	1.45	17.4	44.0	2.77	78.1					
International Harvester H-74	7.7	1.09	1.46	19.0	36.0	3.00	82.3					
Coolerator RB-75	7.7	1.13	1.51	19.6	40.9	3.08	84.0					

¹Approximate operating costs at other rates may be computed by simple proportion. For example, if you pay on the average 2½¢ (instead of 3½¢) per kWhr., the operating cost of the Westinghouse becomes $2\frac{1}{2} \times 95 = 3\frac{1}{2}$ or approximately 68¢ per month.

listings. Outside dimensions given in the listings include hardware. All of the refrigerators tested used sealed compressors and *Freon 12* as a refrigerant. Unless otherwise noted their condensers were of the vertical tubular-plate type located at the rear of the cabinet and were cooled by natural air circulation. Prices given in the listings are list prices.

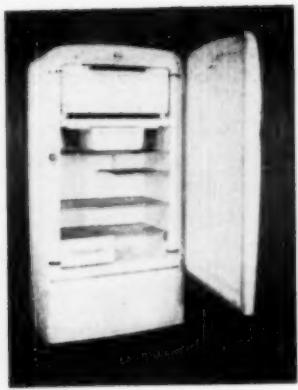
A. Recommended

Coldspot, Model 106-D9P-B1 (Sears, Roebuck & Co.) \$230 in retail stores. Mail order Cat. No. 46-5092 at \$215, plus freight. Total rated capacity, 9.6 cu. ft. (actual, 9.8 cu. ft.). Rated shelf area, 15.4 sq. ft.

(actual, 15.4 sq. ft.). Dimensions, $61\frac{1}{2}$ in. high, $31\frac{1}{4}$ in. wide, $28\frac{1}{4}$ in. deep. Motor horsepower, not stated. Condenser, finned-tube type, mounted horizontally in base of cabinet and cooled by natural air circulation. Insulation, "Colder" (Fiberglas). Frozen-food compartment (volume, 0.77 cu. ft.) located at top center of refrigerator space. Glass drip tray. Left half of bottom shelf, of glass, formed cover for vitreous-enamel "crisper." Had 1 large 35-ice-cube tray, 1 medium 14-ice-cube tray with quick release, and 1 small 16-ice-cube tray, all of aluminum (total, $6\frac{1}{4}$ lb. of ice). Time required to lower temperature from 110°F to a temperature of 46°F, 2.6 hr. (very favorable). Ranked seventh in cost of operation (12.7c) per cu. ft. per month.



Frigidaire Model MM-76



Westinghouse Model AA-84



Crosley Shelvador Model UB-9

Maximum time to make 6½ lb. of ice cubes, 3½ hr. (0.6 hr. per lb.).

Montgomery Ward DeLuxe, Model 05-S-950A (Montgomery Ward's Cat. No. 69—950R) \$224, plus freight. Total rated capacity, 9.3 cu. ft. (actual, 9.4 cu. ft.). Rated shelf area, 18.2 sq. ft. (actual, 17.4 sq. ft.). Motor hp. not stated. Condenser, finned-tube type, mounted vertically in base at back of cabinet and cooled by natural air circulation. Insulation, Fiberglas. Frozen-food compartment (0.85 cu. ft.) located at top center of refrigerator space. Vitreous enamel meat storage drawer with metal cover, which served as a drip tray. Bottom shelf, of glass, formed cover for 2 vitreous enamel "Freshener" drawers. Had 4 aluminum ice-cube trays (2 of which had plastic dividers and 2 with quick release aluminum dividers) to make 56 cubes (7 lb.) of ice. Time required to lower temperature from 110°F to a temperature of 46°F, 2.9 hr. (very favorable). Ranked fifth in group tested in cost of operation per cu. ft. per month (11.8c). Maximum time required to make 7 lb. of ice, 5 hr. (0.7 hr. per lb.).

Hotpoint, Model 12E-18-4 (Hotpoint, Inc., 5600 W. Taylor St., Chicago 44) \$230. Total rated capacity, 8.14 cu. ft. (actual, 8.5 cu. ft.). Rated shelf area, 14.39 sq. ft. (actual, 15 sq. ft.). Dimensions, 59½ in. high, 29¾ in. wide, 28 in. deep. Motor, ½ hp. Insulation, Fiberglas. Frozen-food compartment (0.73 cu. ft.) located at top right-hand corner of refrigerator space. Glass drip tray. Had 4 aluminum ice trays to make 80 cubes (7 lb.). Vegetable drawer, lower right, with aluminum cover as part of shelf. Time required to lower temperature from 110°F to a temperature of 46°F, 3.1 hr. (favorable). Cost of operation per cu. ft. per month, 11.4c (third lowest of refrigerators tested). In ice-making test, maximum time required to make 7 lb. of cubes, 3.5 hr. (0.5 hr. per lb.).

Philco, Model E-904 (Philco Corp., Philadelphia) \$270. Total rated capacity, 9.2 cu. ft. (actual, 9.2 cu. ft.). Rated shelf area, 17.5 sq. ft. (actual, 18.5 sq. ft.). Dimensions, 59¾ in. high, 30 in. wide, 26¾ in. deep. Motor, 1/6 hp. Insulation, mineral wool. Frozen-food compartment (1.06 cu. ft.) extends full width of refrigerator. Aluminum tray mounted 5 in. be-

low frozen-food compartment serves as a drip tray and "Quick Chiller." Lowest shelf, of plate glass, serves as a cover for full width vitreous enamel crisper. Had 4 ice-cube trays to make 56 cubes (7 lb.) of ice. Time required to lower temperature from 110°F to a temperature of 46°F, 3.4 hr. (favorable). Cost of operation per cu. ft. per month, 9.8c (same as Philco E-1103; these two Philcos were the best refrigerators tested in this respect). In ice-making test, maximum time to make 7 lb. of ice, 5 hr. (0.7 hr. per lb.).

Philco, Model E-1103 (Philco Corp.) \$330. Total rated capacity, 11.2 cu. ft. (actual, 11.2 cu. ft.). Rated shelf area, 18 sq. ft. (actual, 19.1 sq. ft.). Dimensions, 62½ in. high, 30¾ in. wide, 26 in. deep. Motor, 1/6 hp. Insulation, Fiberglas. Frozen-food compartment (volume, 1.39 cu. ft.) extends the full width of refrigerator; its top surface is 2 in. below the food compartment, thus providing space for the ice trays. Transparent plastic drip tray, which also served as a "Quick Chiller," mounted 6 in. below frozen-food compartment. Food storage compartment extends from top to within about 8 in. of the floor but at the bottom rear corner at the right-hand side, the liner extends inward to provide a space for the machine compartment. A small plastic drawer marked "Snack Box" about 5 in. deep was located in front of the machine compartment, and to its left a vitreous enamel drawer marked "Freshener." Had 4 aluminum ice trays to make 56 cubes (7 lb.) of ice. Time required to lower temperature from 110°F to a temperature of 46°F, 3.3 hr. (favorable). Cost of operation per cu. ft. per month, 9.8c (this and Philco E-904 had lowest operating cost of all refrigerators tested). Maximum time required to make 7 lb. of ice cubes, 5 hr. (0.7 hr. per lb.).

Frigidaire, Model MM-76 (Frigidaire Div., General Motors Corp., Dayton 1, Ohio) \$235. Total rated capacity, 7.6 cu. ft. (actual, 7.7 cu. ft.). Rated shelf area, 14.7 sq. ft. (actual, 15.8 sq. ft.). Dimensions, 57½ in. high, 32 in. wide, 25½ in. deep. Motor, ½ hp. Condenser, finned-tube type, mounted horizontally in base of cabinet and cooled by natural air circulation. Insulation, fibrous glass or mineral wool. Frozen-food compartment (volume, 0.65 cu. ft.) located at top right-hand side of

refrigerator space. Vitreous enamel meat storage drawer with aluminum cover; cover served as a drip tray. Bottom shelf, of 2 sections plastic, formed covers for 2 vitreous enamel "hydrators." Had 2 single quick release and 1 double aluminum ice-cube trays to make 56 cubes ($7\frac{1}{4}$ lb.) of ice; also a sliding vitreous enamel multi-purpose drawer. Time required to lower temperature from 110°F to a temperature of 46°F , 2.8 hr. (very favorable). Ranked eighth in group tested in cost of operation ($14.5c$) per cu. ft. per month. Maximum time to make $7\frac{1}{4}$ lb. of ice, 5 hr. (approximately 0.7 hr. per lb.). ³

Philco, Model E-703 (Philco Corp., Philadelphia) \$215. Total rated capacity, 7.2 cu. ft. (actual, 7 cu. ft.). Rated shelf area, 14 sq. ft. (actual, 13.7 sq. ft.). Dimensions, $57\frac{1}{4}$ in. high, 25 in. wide, 27 in. deep. Motor, $\frac{3}{8}$ hp. Insulation, mineral wool. Frozen-food compartment (0.7 cu. ft.) extends full width of refrigerator space. Left half of lowest shelf, of glass, formed cover for a vitreous enamel "crisper." Had 3 ice-cube trays to make 42 cubes ($5\frac{1}{4}$ lb.) of ice. Time required to lower temperature from 110°F to a temperature of 46°F , 3.8 hr. (favorable). (The 45% larger Philco E-906 required the same time.) Ranked tenth in the group tested in cost of operation ($15.4c$ per cu. ft. per month). Maximum time required to make $5\frac{1}{4}$ lb. of ice, 3 hr. (0.6 hr. per lb.). ³

Philco, Model E-906 (Philco Corp.) \$320. Total rated capacity, 9.6 cu. ft. (actual, 10.1 cu. ft.). Rated shelf area, 15.5 sq. ft. (actual, 15.7 sq. ft.). Dimensions, 60 in. high, $30\frac{3}{4}$ in. wide, $26\frac{1}{2}$ in. deep. Motor, 1.6 hp. Insulation, Fiberglas. Frozen-food compartment (1.35 cu. ft.) extends full width of refrigerator; its top surface, 2 in. below top of the food compartment, provides space for the ice trays. Transparent plastic drip tray, which also serves as a "Quick Chiller," mounted 6 in. below frozen-food compartment. Food storage compartment extends to within about 8 in. of the floor at the front, 19 in. at rear, with a sloping section of wall at the rear of the bottom; this space is occupied by a similarly shaped aluminum bin marked "Freshener Drawer," covered by a full-sized glass shelf. Had 4 ice-cube trays to make 56 cubes (7 lb.). Time

required to lower temperature from 110°F to a temperature of 46°F , 3.8 hr. (favorable). Ranked sixth in group tested in cost of operation, $12.2c$ per cu. ft. per month. In ice-making test, maximum time to make 7 lb. of ice, 5 hr. (0.7 hr. per lb.). ³

Westinghouse, Model AA-84 (Westinghouse Electric Corp., Appliance Div., Mansfield, Ohio) \$260. Total rated capacity, 8.44 cu. ft. (actual, 8.1 cu. ft.). Rated shelf area, 17.78 sq. ft. (actual, 17.6 sq. ft.). Dimensions, 61 in. high, $30\frac{3}{4}$ in. wide, $26\frac{1}{2}$ in. deep. Motor, $\frac{1}{6}$ hp. Insulation, Fiberglas. Frozen-food compartment (1.72 cu. ft.) extends full width of refrigerator space. Plastic drip tray located about 3 in. below frozen-food compartment. A "Meat Keeper" drawer, also of plastic, slides on plastic glides on bottom of drip tray. Left half of bottom shelf of glass serves as a cover for aluminum "Humidrawer," which has a plastic-faced front. Had 2 single and 1 double width aluminum ice-cube trays to make 56 cubes ($7\frac{1}{4}$ lb.) of ice. Time required to lower temperature from 110°F to a temperature of 46°F , 2.8 hr. (very favorable). Ranked fourth in group tested in cost of operation ($11.7c$) per cu. ft. per month. In ice-making test, maximum time required to make $7\frac{1}{4}$ lb. of ice cubes, 5 hr. (0.7 hr. per lb.). ³

B. Intermediate

Crosley Shelfador, Model UB-9 (Crosley Div., Avco Mfg. Corp., Cincinnati 25) \$250. Total rated capacity, 9.8 cu. ft. (actual, 9.5 cu. ft.). Rated shelf area, 16.43 sq. ft. (actual, 17.7 sq. ft.). Dimensions, 58 in. high, $31\frac{1}{4}$ in. wide, 27 in. deep. Motor, $\frac{1}{8}$ hp. Condenser, finned-tube type, mounted horizontally in base at front of cabinet and cooled by natural air circulation. Insulation, mineral wool or Fiberglas. Frozen-food compartment (0.65 cu. ft.) located at top of refrigerator space (about 9 in. from left side, 5 in. from right). Transparent plastic drip tray. Left half of bottom shelf, of glass, formed cover for transparent plastic "crisper." Door had 5 shelves marked for eggs, bottles and dairy products. Had 4 aluminum ice-cube trays to make 56 cubes (7 lb.). Time required to lower temperature from 110°F to a temperature of 46°F , 4.1 hr. (only fair). Ranked



Norge Model SF-85



Gibson Model G-820, Unit Model AHF-850



Kelvinator Model RK-R



Admiral Model 960



Crolerator Model RB-75



International Harvester Model H-74

ninth in the group tested in cost of operation per cu. ft. per month (15.3c). Maximum time required to make 7 lb. of ice, 6 hr. (approximately 0.9 hr. per lb.), relatively slow.

Norge, Model SF-85 (Norge Div., Borg-Warner Corp., Detroit 26) \$250. Total rated capacity, 8 cu. ft. (actual, 8.3 cu. ft.). Rated shelf area, not stated (actual, 16.5 sq. ft.). Dimensions, 58½ in. high, 30½ in. wide, 26½ in. deep. Motor, 3/8 hp. Condenser, finned-tube type, mounted horizontally in base of cabinet and cooled by natural air circulation. Insulation, Fiberglas. Frozen-food compartment (0.93 cu. ft.) extends full width of refrigerator space. Plastic drip tray located about 3 in. below. Plastic meat-storage drawer located under right-hand side of drip tray. Left half of bottom shelf, of glass, formed cover for metal vegetable drawer. Non-refrigerated storage bin. Had 4 aluminum ice-cube trays to make 56 cubes (7 lb.). Time required to lower temperature from 110°F to a temperature of 46°F, 4.5 hr. (only fair). Cost of operation per cu. ft. per month, 17.4c (relatively high). Maximum time required to make 7 lb. of ice, 3½ hr. (0.5 hr. per lb.), good.

Gibson, Model G-820, Unit Model AHF-850 (Gibson Refrigerator Co., Greenville, Mich.) \$260. Total rated capacity, 8 cu. ft. (actual, 8.3 cu. ft.). Rated shelf area, 12.9 sq. ft. (actual, 12.6 sq. ft.). Dimensions, 61¾ in. high, 31½ in. wide, 28½ in. deep. Motor, 3/8 hp. Condenser, tubular type located at back of cabinet and cooled by natural air circulation. Insulation, Cellulose Fibre. Frozen-food compartment (volume, 1 cu. ft.) extends full width of refrigerator. Full-width vitreous enamel "Freshener Shelf" and drip tray. Left half of lowest shelf of plate glass, which serves as a cover for a vitreous enamel crisper. Had 1 aluminum ice-cube tray and 1 aluminum tray with individual plastic cups to make a total of 26 cubes, 2.88 lb. of ice. Time required to lower temperature from 110°F to a temperature of 46°F, 4.5 hr. (only fair). Ranked twelfth in cost of operation (16.3c per cu. ft. per month). Maximum time to make 2.88 lb. of ice cubes, 5 hr. (1.7 hr. per lb.), relatively slow due to plastic cups which greatly retard freezing.

Kelvinator, Model RK R (Nash-Kelvinator Corp., De-

troit) \$250. Total rated capacity, 8.0 cu. ft. (actual, 7.7 cu. ft.). Rated shelf area, 15.0 sq. ft. (actual, 14.7 sq. ft.). Dimension, 58 in. high, 31½ in. wide, 28½ in. deep. Motor, 3/8 hp. Insulation, Fiberglas. Frozen-food compartment (1.0 cu. ft.) extends full width of refrigerator space. Plastic baffle, located about 1 in. below frozen-food compartment, on which moisture was collected and drained during defrosting operation into plastic container located at right rear of box on shelf beneath. Left half of bottom shelf, of glass, formed cover for plastic "crisper." Had 2 single and 1 double width aluminum ice-cube trays to make 56 cubes (7¾ lb.). Time required to lower temperature from 110°F to a temperature of 46°F, 3.1 hr. (favorable). Ranked thirteenth in group tested in cost of operation (16.5c per cu. ft. per month). In ice-making test, maximum time required to make 7¾ lb. of ice cubes, 4 hr. (0.5 hr. per lb.).

3

C. Not Recommended

Admiral, Model 960 (Admiral Corp., Chicago) \$230. Total rated capacity, 9.1 cu. ft. (actual, 9.5 cu. ft.). Rated shelf area, 17.4 sq. ft. (actual, 17.5 sq. ft.). Dimensions, 56 in. high, 28½ in. wide, 30 in. deep. Motor, 1/9 hp. Insulation, balsam wool. Frozen-food compartment (1.06 cu. ft.) extends full width of refrigerator space. Plastic drip tray, intended to be used also for storing of foods already frozen, could be located in 2 positions, one about 2½ in. and one about 3½ in. below frozen-food compartment. Right half of bottom shelf, of glass, formed cover for transparent plastic "vegetable crisper." Food storage compartment extends to within about 7½ in. of the floor, with a sloping section of wall at the rear of the bottom, to provide room for compressor. Had 2 aluminum ice-cube trays to make 28 cubes (3½ lb.). In pull-down test from 110°F, lowest temperature obtained after 8½ hr. was 50°F; after a further 2 days of continuous running the required temperature of 46°F could not be obtained (unsatisfactory). Ranked eleventh in cost of operation (15.6c per cu. ft. per month). Maximum time required to make 3½ lb. of ice, 5½ hr. (1.6 hr. per lb.), relatively slow.

1

Coolerator, Model RB-75 (The Coolerator Co., Duluth, Minn.) \$200. Total rated capacity, 7.5 cu. ft. (actual, 7.7 cu. ft.). Rated shelf area, 13.6 sq. ft. (actual, 14.0 sq. ft.). Dimensions, 58 in. high, 24½ in. wide, 27¾ in. deep. Compressor mounted in rear of refrigerator; motor, ½ hp. Insulation, balsam wool. Frozen-food compartment (0.66 cu. ft.) located at top right of refrigerator space. Glass drip tray. Food storage compartment extends to within about 6 in. from the floor. Had 2 aluminum ice-cube trays with plastic inserts to make 28 cubes (3 lb.) of ice. Time required to lower temperature from 110°F to a temperature of 46°F, 6.8 hr. (relatively poor). Cost of operation per cu. ft. per month, 19.6c (highest of all refrigerators in group tested). Maximum time required to make 3 lb. of ice, 5 hr. (1.7 hr. per lb.), relatively slow. ¹

International Harvester, Model II-74 (International Har-

vester Co., Chicago) \$215. Total rated capacity, 7.4 cu. ft. (actual, 7.7 cu. ft.). Rated shelf area, 14.5 sq. ft. (actual, 13.9 sq. ft.). Dimensions, 54½ in. high, 24¾ in. wide, 28¾ in. deep. Motor, ¾ hp. Insulation, glass fiber. Frozen-food compartment (0.98 cu. ft.) extends full width of refrigerator space. Plastic drip tray. Right half of lowest shelf, of plate glass, formed cover for a plastic vegetable drawer. Non-refrigerated storage bin accessible only with door open. Had 2 aluminum ice-cube trays with plastic dividers to make 28 cubes (3 lb.). Time required to lower temperature from 110°F to a temperature of 46°F, 4.8 hr. (only fair). Ranked next to the highest in cost of operation of group tested (19.0c per cu. ft. per month). Maximum time required to make 3 lb. of ice cubes, 3 hr. (1 hr. per lb.). ²

Care of Shoes

STORE SHOES in a dry, cool storage place, both to lengthen their life and to prevent the formation of mold. Attic storerooms or closets that are hot are not suitable for storing of shoes; excessive heat will cause drying out and loss of life of the leather. Thorough cleaning before storage will lengthen life, as will also dressing with an "oil polish" (or oil, for work shoes or hiking shoes), when the shoes are again taken out of storage, and before wearing.

In cold weather, keep shoes as dry as possible, for wet shoes will freeze more easily, and ice or frost forming within the leather splits or cracks it. Patent leather shoes will crack if they are put on when they are cold; they should be warmed very gently (e.g., with the palm of the hand) before wearing.

Wet shoes should be kept away from a fire, stove, or radiator. As leather is quite weak when wet, wearing wet shoes may cause them to pull out of shape and cause breaks or other damage. (Do not use stretcher-type shoe trees inside wet shoes, for they may stretch the leather permanently out of shape.) Stuff the shoes with paper or cloth and pat with a soft cloth. Repeated wettings extract oils and other essential materials from the leather, causing it to become hard and brittle and subject to cracking and scuffing. When the shoes are drying, they should be cleaned with saddle soap, and then rubbed with castor oil, which can be had at drugstores. Use only as much oil as the leather will absorb readily, as too much interferes with polishing.

White shoes should be stuffed with tissue paper or placed on shoe trees, then cleaned and allowed to dry thoroughly before they are worn. Shoes that are grass-stained may be treated with a solution of sodium perborate or peroxide to lighten the stain. The polish should be removed; then the stain brushed well, but rapidly, with the bleaching solu-

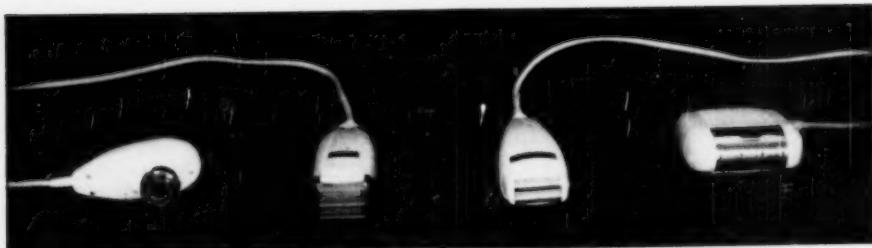
tion, and rinsed with water. White shoe cleaner or polish may then be applied as usual.

Shoes wear by friction or abrasion against floor surfaces, and sand or grit ground into the shoe or adhering to it increases wear. Mud and dirt should be washed off shoes as soon as possible (but with use of no more water than necessary), as these materials hasten deterioration and cracking of uppers. Contact with acids or alkalies, which damage leather, should be avoided, or when that is impossible, the acid or alkali should be neutralized as soon as possible.

Since perspiration deteriorates leather, considerable extra wear will be secured if shoes are allowed to air out between wearings; likewise shoes should be kept on properly designed shoe trees when not being worn.

Shoes should be resoled before the soles wear through. Heels should be repaired promptly, as soon as they show sufficient unevenness to throw the shoe out of shape and affect posture; if this is not done, the whole shoe will be seriously damaged and its construction weakened and deteriorated. Children's shoes, especially, should be repaired promptly; it is important to repair ripped seams at once.

Those who have need for an extra careful and thorough job in repair or reconditioning of a particular pair of shoes or who have difficulty in getting new shoes that fit, may find it worth while to locate in their city or a near-by large city a firm that makes a specialty of rebuilding and completely reconditioning shoes. Two such firms which will handle repairs by mail are: T. O. Dey, 509 Fifth Ave., New York 17, and B. Nelson Co., 10 E. 39 St., New York 16. Rebuilding jobs which involve change of size or shape cannot, of course, be handled too well by mail, since one or more fittings are desirable, if not required. A good rebuilding job is expensive, and may cost as much as a new pair of good shoes; it will be wanted, therefore, only in exceptional cases.



From left to right: Norelco Type 7735, Remington Contour 6, Schick Super Model 400, Shavemaster Model "W"

Electric Shavers

SINCE CR's last report on electric shavers, some shavers have been changed in style and construction while others have been discontinued. A new one, the *Norelco*, is being imported from Holland. Of the new models, the most notable is the *Shavemaster* which uses a compact rectangular shape and provides twice as much "shaving surface" as the older model. Discontinued brands and models, if bought, even at a lower price, may prove to be a serious risk in respect to service and replacement parts and prices of parts and repairs.

Electric shavers do not shave as closely as an ordinary safety razor with a good blade and may cause severe skin irritation to some users. Many feel, however, that they are an improvement over safety razors, and that they eliminate much of the bother of shaving. Some shavers may be used with success and reasonable facility and speed after a few trials; with others, it may be necessary to develop a special technique after a period of practice before results seem satisfactory.

Water and soap are not necessary with electric shavers, but, since they do need electricity and will require repairs from time to time, a non-electric razor should always be kept about for use in an emergency. A razor of some kind will be a necessity in camp or other unelectrified area or where electricity is at the wrong voltage or frequency. Remember, too, that there is a special danger with any electrical appliance that is used in the bathroom where the possibilities of electric shock from any failure or breakdown are greatly increased above normal.

After a shaver has been in use for a while, the cutting edges become dulled to such an extent that its cutting efficiency is reduced considerably. One of the shavers tested, the *Shavemaster*, provides a small tube of sharpening compound with instructions which recommend that the cutting edges be sharpened once every two or three months. In-

struction booklets of some brands recommend that the shavers either be serviced every three months to one year by an authorized dealer or returned to the factory. This practice could become costly after the warranty expires and could be an inconvenience. The prospective purchaser will do well to get information on these service charges from his dealer before buying any shaver. CR is interested in hearing from subscribers about their experiences in having electric shavers repaired.

Extensive use tests were given the shavers to determine their effectiveness in shaving. These tests were a compilation of observations made by seven users on the performance of and reaction to the shavers. To ascertain the closeness of shave, each shaver was used in daily shaving in a normal manner. At the completion of the shave a second shaver, previously cleaned of all hair, was used in a like manner. Following the shave, the hair retained in the second shaver was weighed on an analytical balance. This gave a good indication of how completely the first shaver had removed the beard. The shavers were also examined for mechanical construction, the steadiness and reliability of their motors, the ease and convenience with which they could be used, whether or not they caused skin irritation, and whether operating noise, radio interference, or vibration was excessive.

The shavers tested employed two types of motors. One type, in which a set of contact points "make and break" the circuit, requires the operator to spin the rotor or, in one case, preset it to start the shaver. The other type, using a commutator and brushes, is self-starting.

So far as the electrical measurements indicated, all the shavers were judged not to involve any significant degree of shock hazard. The temperatures of all the shaver cases after 15 minutes' operation were within the accepted limits of 130°F for materials other than metal. All were usable on

either a.c. or d.c.

Ratings, listed in order of merit, were made mainly on the basis of shaving ability, since this was considered to be the most important quality.

Ratings are cr50.

A. Recommended

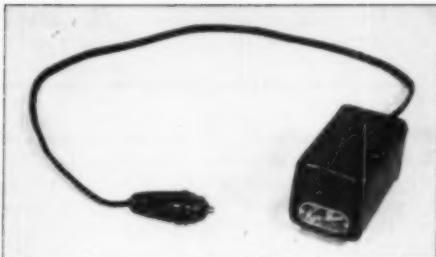
Schick Super, Model 400 (Schick Inc., Stamford, Conn.) \$22.50. Contact-making type of motor, started by combination switch and "kicker" lever. A fast, close-cutting shaver. Caused no skin irritation. Only moderately noisy, but radio interference was objectionable. Effectively sealed against entry of clippings into mechanism. ³

Shavemaster, Model "W" (Sunbeam Corp., 5600 Roosevelt Road, Chicago 50) \$24.50. Commutator-type motor; self-starting. Fast, close-cutting. Created unpleasant burning sensation on skin of some users. Slightly noisier than Schick, and radio interference was objectionable. Some infiltration of clippings. Compact rectangular shape, may not be as easy to hold as some others. ³

Remington Contour 6 (Remington Rand, Inc., Electric Shaver Div., Bridgeport 2, Conn.) \$23.50. Contact-making type motor. Self-starting only if starting wheel is preset to a mark. Fast and fairly close cutting. Squared outside edges on shaving heads may irritate skin of neck if shaver is tilted. Quite noisy, and some radio interference. Effectively sealed against entry of clippings. ³

B. Intermediate

Norelco, Type 7735 (Distributed by North American Philips Co., Inc., 100 E. 42 St., New York 17; made in Holland) \$16.50. Commutator-type motor; self-starting. A circular cutting head, rotary blade. Action rather slow; not as effective in shaving as ones rated A. Quiet, but some radio interference. Effectively sealed against entry of clippings. This would make a good shaver for use in "freshening up" for an evening appointment. ²



Kar-Shave

Conversion Device for Electric Shavers

The Kar-Shave is a device designed to supply a power source for 110-volt ac-dc electric shavers from a 6-volt automobile battery (which supplies direct current). It consists of a vibrator, transformer, rectifier, and capacitor in a small enameled metal case. On one end there is a standard outlet connection and on the other a 2-ft. 2-in. cord terminating in a special plastic plug for insertion in the cigarette lighter outlet of the car. The plug is held in place by two friction springs.

In an operation test three different makes of electric shavers with wattages of 5, 11, and 14, on 110 volts a.c., performed satisfactorily with the Kar-Shave. There was, however, a noticeable reduction in the speeds of the shavers. After operating for 15 minutes, the metal case of Kar-Shave was only slightly warm to the touch.

Users of electric shavers who do a considerable amount of driving, such as salesmen and executives, may find the Kar-Shave a useful device. The unit can be stored in the automobile glove compartment.

A. Recommended

Kar-Shave (Terado Co., St. Paul) \$9.95. Rated 6 volts, d.c. input, 110 volts, 15 watts output. No life test made.

Back Numbers of Bulletins at Bargain Rates for Teachers

TO MEET the many requests we have received, certain back BULLETINS of CR will be sent in lots of 20 or more at a reduced price, provided the person ordering will permit CR to select the issues to be included. (The back issues chosen in filling orders at this special price will be those of which an adequate stock remains. There will be duplications of issues; for example, there may be as many as 5 each of 6 different issues in a lot of 30 BULLETINS.) When we may select the issues in the way indicated, we shall be glad to accommodate teachers having classes in sociology, buymanship, consumer problems, consumer science, consumption economics, problems of democracy, science survey courses, etc., at the very low

price of 5c a copy. The regular price of single copies of CR BULLETINS is 30c.

The only charge to the school or other institution will be the 5c per BULLETIN (to be remitted with the order) and express or parcel post charges for the package, which will be sent collect or C.O.D. for postage charges. The postage rate, including C.O.D. charge, on 20 BULLETINS in the first and second zones will be 39c (up to 150 miles); in the fifth zone (600 to 1000 miles), 53c; in the eighth zone (over 1800 miles), 73c, in addition to the \$1 charge for the 20 issues. The order may be placed on the regular order form used for school purchases, or if preferred, as a letter written on the school's letterhead.

A Dehumidifier

IN many parts of the country weather conditions are such that at several periods during a year, the relative humidity will be quite high, perhaps for weeks at a time. When this happens, homes, and especially basements, become damp, and fabrics, books, leather goods, and certain other items which are stored tend to become affected to a certain extent by mildew or mold.

There are several methods available which can be used to eliminate or correct this condition. A small electric light, for instance, placed at a safe place in a closed bookcase will tend to raise the temperature of the air; this reduces the relative humidity, may even eliminate the possibility of mildew formation. There are, in addition, methods available for treating certain fabrics and leather goods with chemicals which kill the life processes of the mold. By a third method, a container is used that is filled with a chemical, such as calcium chloride, which absorbs moisture from the air and thus lowers the relative humidity. The latter method will work for a time, but is practicable only in a small space, for the chemical soon takes up all the moisture it can hold, and the dehumidifying action and consequent protection against mildew formation ceases.

Recently, so-called dehumidifying devices which can be plugged into the usual electrical wall socket have been marketed. Their mode of operation offers several advantages over any of the other methods used for mildew prevention. In addition, their capacity is sufficiently large that in many instances they can be used for drying a damp basement or hobby room.

The *Frigidaire Dehumidifier* consists essentially of a refrigerating mechanism of small output (cooling capacity) powered by a $\frac{1}{3}$ -horsepower electric motor, and a fan. The fan is used to circulate the humid air in a room over a series of coils cooled by the refrigerating mechanism. Some of the moisture in the air condenses on the coil surfaces as the air passes through the unit, and then drains into a container in the lower part of the appliance. The action is exactly like the familiar condensation of moisture from the air of a damp basement on a cold water pipe.

For CR's tests, the dehumidifier was placed in a medium-sized well-insulated room (1120 cu. ft.) in which both the temperature and humidity were controlled automatically. The air, as discharged from the *dehumidifier*, was run through a suitable tunnel to a flow meter, also located in the room. Periodic measurements were made of the temperature and humidity of the air of the room and the air



Frigidaire Dehumidifier Model BK-1

at the point where it was discharged from the appliance. In addition, the air delivery from the device in cubic feet and the amount of water collected were measured.

It was found that there was a noticeable reduction in the relative humidity of the air discharged into the room, and also a slight rise in its temperature. The rise in air temperature can be accounted for by the fact that the electrical energy consumed by the device must appear finally in the form of heat. In addition, the change of water from the vapor to the liquid state, involves the liberation of a considerable amount of heat (about 1050 Btu per pound at 68°F) for each pound of vapor condensed.

Under one particular test condition, the device removed 513 grams or something over one pound of moisture from the air in the 1120 cu. ft. test room, equivalent to a room of 10 x 14 x 8 ft., in a two-hour period and the relative humidity of the air discharged by it was approximately 20 percent below that of the room air (which was 88% at beginning of the run, 70% at end). This and other tests indicated that the device would function effectively as claimed by the manufacturer, to reduce the relative humidity in a closed space to a useful extent.

A particular use for which a dehumidifier is well adapted is to dry damp cellars. One qualified scientist has informed CR that he estimates that drying a cellar by this means would appear to be more economical by a substantial factor, as an engineering matter, than use of insulation on the walls and floor. He estimated roughly that a depreciation of \$15 per year, assuming a reasonable life in service (roughly 10 years), on the dehumidifier would be less than the depreciation on the installed walls and floor which, in his case, would have cost

approximately \$600, and with the appliance he would be sure of having a dry cellar. He also suggested that a close study be made of the cost of a particular installation of walls, woodwork, etc., before a choice was decided on. In his particular case, the *Frigidaire Dehumidifier* collected approximately 1 gallon of water during a 24-hour period in a cellar of 4000 cu. ft. volume. Drying out a room involves more than the removal of the moisture contained in the air within it. It also requires extraction, perhaps over a considerable period of time, of the moisture present in the walls, floors, furniture, drapes, etc.

Because of the many variables involved in practical use, such as room size, leakage of air through walls, and the air temperature and relative humidity conditions which prevail, no one can say, even approximately, what results might be expected in a particular case, and it is therefore suggested that the appliance, if needed, be purchased on a trial

basis only, with the privilege of full refund if unsatisfactory for use in a particular application.*

B. Intermediate

Frigidaire Dehumidifier, Model BK-1 (Frigidaire Div., General Motors Corp., 300 Taylor St., Dayton 1, Ohio) \$150. Compressor motor, $\frac{1}{4}$ hp.; fan motor, 1/100 hp. Watts input, 150 to 220. Weight, 80 lb. Supply cord, 7 ft. 4 in. Cylindrical shape, $14\frac{1}{4}$ in. in diameter, $33\frac{3}{4}$ in. high. Refrigerant, *Freon 12* (dichlorodifluoromethane). Construction and assembly appeared to be satisfactory; those parts on which moisture might collect during use were provided with a corrosion-resistant finish. Some operating noise, but not considered excessive for any ordinary location. Cost of operation per 24 hours with electricity at 3.5c per kWhr., about 16c. Carried Underwriters' Laboratories' label. Passed proof voltage test; negligible leakage current on sample tested. Four different locations were used to present data which should have appeared on a single readily available name plate.

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parking, bad practices in Feb., 14	fuels, solid, hand-firing April, 28-22	automobile drivers [†] June, 12-14
sales, increased Aug., 3	warm-air furnaces, automatically-fired [†] Jan., 18-21	Screen device, novelty [†] Aug., 12
tires [†] Jan., 22-23	gravity and forced-circulation [†] Feb., 22-26	Shears, pinking [†] Mar., 16-17
transmissions [†] Jan., 22-23	Heels, rubber, men's [†] June, 11	Spoons, laundry, household [†] Aug., 13-16
Batteries, flashlight [†] April, 24	Home building, inferior lumber Aug., 4	Sprayer, paint, electric [†] Jan., 34
Bedsprings, box [†] April, 10-12	Iron, combination steam and dry [†] Jan., 26	Tables, folding [†] May, 30; Aug., 30
Carriages, baby, folding [†] Mar., 5-8	Lawn mowers, hand [†] July, 15-16	Teeth, effect of phosphoric acid July, 29
Clocks, electric [†] May, 18-19	power [†] Aug., 9-12	Telescope, inexpensive [†] May, 9
Clothing, for dampening [†] June, 27	Liquefiers, liquidizers, or blenders [†] Feb., 9-10	Television, antennas [†] May, 24-26
garment carrier, plastic [†] Aug., 30	Moths, clothes, prevention and control [†] Aug., 15-19	boosters [†] Feb., 11-12
gloves, men's [†] Feb., 5-8	Motion pictures [†] each issue	gadget for viewing motion picture showings by telephone [†] Aug., 8
name tapes [†] June, 28	Odors, household, elimination, pamphlet available Aug., 4	receivers [†] May, 5-7; July, 17-18
raincoats, men's, plastic film [†] May, 16-17	Oiler, fountain-pen style [†] Aug., 29-30	tuner [†] May, 7
suits, men's [†] April, 5-8	Ovenware, glass [†] Feb., 13-14	Tractor, garden [†] May, 20-21
Coffee, soluble [†] Aug., 24-25	Paint brushes, care [†] May, 17	Vacuum cleaners [†] Jan., 5-8
Corrections and emendations Jan., 14; Feb., 20; Mar., 15; April, 16; June, 17; Aug., 8	Paints, house and barn — II [†] Apr., 17-19	Washing machines, automatic [†] Jan., 27-30; May, 8-9
Correspondence, subscribers', to CR [†] (Editor's Note) Mar., 17	Phonographs [†] pickup cartridge, replacing [†] Jan., 37-38	hot-water supply June, 8-10
CR's Bulletin, in microfilm [†] June, 19	record brush Omegatron [†] Mar., 25	nonautomatic [†] May, 9
CR's material of interest in home economics courses May, 12	recorders, tape and wire [†] Jan., 15-17; May, 23	replacement bags for National Watermatic [†] July, 23
Dentifrices, ammoniated Aug., 4	price cutting [†] July, 4; Aug., 3	Waxes, floor [†] Mar., 21-23
penicillin July, 29	turntables, pickup arms and accessories [†] Mar., 14-15	Weed killers [†] Aug., 22
Detergents, "no-rinse" [†] Aug., 20-22	Photographic books [†] July, 18	effected on vegetables and flowers [†] July, 3
synthetic, home laundering Aug., 20-22	camera, "imitation reflex" [†] Jan., 31	Whiskers [†] Aug., 13-14
Dyers, clothes [†] Aug., 5-8	motion picture [†] Jan., 32	Windows, storm and screen combination, aluminum [†] Apr., 28
Editorial each issue, page 2		X-rays, diagnostic use, not harmless [†] June, 19
Editor's Note re subscribers' correspondence Mar., 17		
Etching paste, for glass [†] June, 28		Indicates that listings of names or brands are included.



Examining a sheet for defects after one of the 50 launderings.

SHEETS

HOUSEWIVES buy many things for their homes because of fashion or style considerations, but when they buy sheets most women buy principally for durability. Some homemakers, of course, buy fine percale sheets (Type 200) which are light in weight with a very high thread count. These are real luxury sheets and are used in the ordinary household more as guest sheets, than for general use. As a matter of fact, some women find them undesirable since, being thin, they tend to wrinkle easily and therefore become uncomfortable to lie on.

For durability, the best quality sheet is the heavy-weight muslin of a type known as 140. These sheets do not wrinkle readily, and stay in place well on a bed. They will stand hard laundering and they normally wear longer. In CR's tests it was found that one of the sheets of this type, the *Fieldcrest Golden Gate*, retained its strength very well with repeated laundering. Indeed, after 50 launderings, its breaking strength in both directions still exceeded specification requirements for the type. One disadvantage of heavy sheets of this kind is that they weigh a good deal more, and if the laundering is done commercially, the cost will be greater than that for laundering sheets of lighter weight, in proportion to the extra weight. A finer sheet, but one that is not so strong, is the Type 180, or what is called a utility percale. This sheeting is more closely woven than the Type 140 but the threads are smaller. It is not so strong as the heavier sheeting, but it is a little more smooth. The initial cost of these percale sheets is higher than for Type 140 muslin, but if the laundering is done

by the pound, the percale sheets will cost a little less to launder. (With laundering at 12 cents a pound, the saving would amount to about 5 cents per sheet per washing for an 81 x 108 in. sheet.)

Medium-weight muslin sheets are not so strong as the other two and do not have the durability of either a heavy-weight muslin or the carded percale. These sheets contain more sizing, and have fewer threads per square inch than the others.

The present test of sheets confirmed the finding which CR has frequently made in respect to consumers' goods of all sorts; viz., that there is no particular relationship between price and quality. It will be noted that one of the *A-Recommended* sheets (*Hostess*) cost the consumer the same price per square yard as one of the two *C-Not-Recommended* sheets. Of the three lowest-priced sheets, two were in the *B-Intermediate* and one in the *C-Not-Recommended* group. The average price per square yard of the sheets in the *A* group was about the same as for the sheets in the *B* group.

Aside from general considerations of weight and feel, there are other factors that should be taken into account when purchasing sheets. Sheets must be long enough and wide enough to fit a bed. The ordinary mattress is 75 in. in length and may be assumed to be about 5 in. deep. If you like to turn your sheet back over the blankets and tuck it well under the mattress, you will need a sheet of at least 108-in. length. Ninety-nine inches will do if you do not care particularly about tucking it in or turning it back far. Remember, however, that a sheet cannot stand strong pulling or tugging,

Furthermore, a skimpy sheet that is too short won't look right on the bed. Shrinkage, of course, will make a sheet substantially smaller than when it was new.

CR considers a shrinkage of more than 5 percent in length to be excessive. In this test it was found that the average shrinkage in a sheet lengthwise was a little over 6 percent, and the best sheet with respect to shrinkage shrank near 5 percent in length; the percentage for the worst was 8.5. Mention is made in the listings, when a sheet had less than 5 percent shrinkage in the lengthwise direction (desirable). Shrinkage above 7 percent is also mentioned.

The housewife still has a right to expect a good deal more from sheet manufacturers in the way of good labeling. Some notable exceptions are the Pacific Facebooks, the Cannon Mills packages, and the rather full label supplied on the Pequot Mills Type 140 sheets. These labels gave information regarding the thread count in both directions, the filling, and the shrinkage in the warp direction. The Pacific Facebooks and Cannon Mills sheet packages gave breaking strength figures also. Fieldcrest Mills, and a number of others, gave a minimum of information. Insufficient information on the label would not be too troublesome, if the brand names could be relied upon to be correctly descriptive. Unfortunately this is not the case, and sometimes one kind of sheet carries several brand names. Pepperell's Type 128 sheet, for example, was sold as *Pepperell Red Label*, *Pepperell Utility Muslin*, and *Pepperell Quality Muslin*.

Before they were laundered all of the sheets tested met or nearly met the specifications for their type,

except for sizing. There were, however, great differences in how well they retained their strength after 50 launderings. When breaking strengths after laundering were satisfactory but not exceptionally good or exceptionally bad, no comment is made in the listing. Two sheets, *Fruit of the Loom Colonial Dame* and *Ward's Longwear* did not decrease in average breaking strength in the filling direction after laundering; there was, however, considerable variation in the readings. The ratings of the sheets in A, B, and C groups are on the basis of their tensile strengths after 50 launderings. Sizing for all sheets met the American Society for Testing Materials specifications' requirements for sheets of the type except where noted. The weight given is weight per square yard. The price in parentheses following the price of the sheets was the calculated price per square yard of the sheeting. Sheets were 81 x 108 in. (torn size) except where otherwise noted.

A. Recommended

Fieldcrest Golden Gate (Fieldcrest Mills, Div. of Marshall Field & Co., Inc., 88 Worth St., New York 13) \$2.95 (44c). Type 140. Weight, 4.9 oz. (one of the heaviest sheets tested). Thread count in warp direction a little low. Average breaking strength before laundering (83 lb. in warp direction and 77 lb. in filling direction) and after laundering (70 lb. and 71 lb.), very good. Strongest sheet after 50 launderings. ²

Fort Sumter, a Springmaid Cotton (Springs Cotton Mills, Lancaster, S.C.) \$2.60 (39c). Type 140. Weight, 4.8 oz. Breaking strength before laundering (74 lb. and 79 lb.) and after laundering (64 lb. and 72 lb.), very good. ²

Fruit of the Loom, Extra Weight (Fruit of the Loom Corp., 40 Worth St., New York 13) \$2.79 (41c). Type 140.

PHYSICAL REQUIREMENTS OF BLEACHED WIDE COTTON SHEETING (FINISHED) from A. S. T. M. Specifications D503-48T

	Type 200 ¹ (Combed Percale)	Type 180 (Carded Percale)	Type 140 (Heavy- Weight Muslin)	Type 128 (Medium- Weight Muslin)
Character of yarn.....	combed	carded	carded	carded
Count, min., yarns per in.:				
Warp.....	104	94	74	68
Filling.....	98	84	66	60
Weight, oz. per sq. yd., min.	3.6	3.6	4.6	4.2
Breaking strength, min., lb. (Grab test):				
Warp.....	65	60	70	55
Filling.....	70	60	70	55
Sizing, max., percent.....	1.0	1.0	3.0	5.0

¹For classification purposes, merely, sheetings are designated on the basis of the number of warp yarns per inch plus the number of filling yarns per inch.

Weight, 4.6 oz. Breaking strength before laundering (71 lb. and 73 lb.) and after laundering (64 lb. and 70 lb.), good. **2**

Harmony House "Best Quality" (Sears-Roebuck's Cat. No. 96-7282) 2 for \$4.82, plus postage (37c). Type 140. Weight, 4.8 oz. Breaking strength before laundering (76 lb. and 89 lb.) and after laundering (65 lb. and 71 lb.), very good. Shrinkage in warp direction (lengthwise), high (undesirable). **2**

Harmony House Percale (Sears-Roebuck's Cat. No. 96-6982) 2 for \$5.88, plus postage (45c). Type 180. Weight, 3.9 oz. Shrinkage in warp direction, somewhat high (undesirable). Thread count a little low in the warp direction. Breaking strength before laundering (70 lb. and 75 lb.), very good for a sheet of this type; after laundering (65 lb. and 61 lb.), good. **2**

Hostess (Spiegel's Cat. No. 69-7123, Spiegel, Chicago 9) 2 for \$4.78, plus postage (37c). Type 140. Weight, 4.8 oz. Breaking strength before laundering (81 lb. and 78 lb.) and after laundering (67 lb. and 67 lb.), very good. **2**

Pepperell Countess (Pepperell Mfg. Co., 160 State St., Boston 9) 2 for \$5.42, plus postage (42c). Type 140. Weight, 4.7 oz. Breaking strength before laundering (70 lb. and 76 lb.) and after laundering (62 lb. and 71 lb.), good. This sheet also sold as *Lady Pepperell, Pepperell Duchess, and Pepperell Abbotsford Luxury Muslin*. **2**

Utica (Utica & Mohawk Cotton Mills, Inc., Utica, N.Y.) \$2.69 (40c). Type 140. Weight, 4.9 oz., one of the heaviest sheets tested. Breaking strength before laundering (74 lb. and 77 lb.) and after laundering (64 lb. and 74 lb.), very good. **2**

Cannon Cavalier Percale (Cannon Mills, Inc., 70 Worth St., New York 13) 2 for \$6.38 (47c). Type 180. Weight, 3.8 oz. Breaking strength before laundering (72 lb. and 71 lb.) and after laundering (61 lb. and 59 lb.), good. **3**

B. Intermediate

Longwear (Montgomery Ward's Cat. No. 16-3258) 2 for \$3.98, plus postage (30c). Type 128. Weight, 4.5 oz. **1**

Starloom (Spiegel's Cat. No. 69-7113) 2 for \$3.98, plus postage (30c). Type 128. Weight, 4.6 oz. **1**

Cannon Muslin (Cannon Mills Inc.) 2 for \$4.98 (37c). Type 128. Weight, 4.2 oz. **2**

Fieldcrest Wearwell (Fieldcrest Mills) \$2.60 (39c). Type 128. Weight, 4.6 oz. **2**

Fruit of the Loom Colonial Dame (Fruit of the Loom Corp.) \$2.19 (35c). 81 x 99 in. Type 128. Weight, 4.6 oz. Sizing slightly in excess of maximum for a sheet of this type. **2**

Gabrielle Combed Percale (Gimbels Bros., Broadway and 33 St., New York 1) \$2.79 (41c). Type 180. Weight, 3.8 oz. Thread count in warp direction a little low for the type. **2**

Mohawk (Utica & Mohawk Cotton Mills, Inc.) \$2.79 (41c). A "Type 132 sheet," but nearly met specifications for Type 140. Weight, 4.2 oz. Breaking strength in filling direction a little below specifications limit for Type 140 sheet. **2**

Mohawk Percale (Utica & Mohawk Cotton Mills, Inc.) \$2.95 (44c). Type 180. Weight, 3.8 oz. Percent of sizing considerably above permissible maximum for this type. **2**

Nashua Combed Percale (Textron Inc., 350 Fifth Ave., New York 1) \$2.95 (44c). Type 180. Weight, 3.8 oz. Contained maximum sizing allowable for a sheet of this type. **2**

Pacific Truth (Pacific Mills, 214 Church St., New York 13) \$2.29 (37c). 81 x 99 in. Type 128. Weight, 4.4 oz. Shrinkage in the warp direction, high (undesirable). **2**

Pepperell Red Label (Pepperell Mfg. Co.) \$2.39 (36c). Type 128. Weight, 4.3 oz. This sheet is also sold as *Pepperell Utility Muslin and Pepperell Quality Muslin*. **2**

Pequot (Pequot Mills, Empire State Bldg., New York 1) \$2.99 (40c). 90 x 108 in. Type 140. Weight, 4.6 oz. **2**

Sovereign (Substituted for Spiegel's Cat. No. 69-7141) \$2.90, plus postage (44c). Type 180. Weight, 3.8 oz. Loss in breaking strength with laundering, very little. Not listed in current catalog. **2**

Thomaston Tavern (Thomaston Mills, Thomaston, Ga.) \$2.69 (40c). Type 140. Weight, 4.8 oz. Contained the maximum sizing allowable for a sheet of this type. **2**

Treasure Chest Muslin (Montgomery Ward's Cat. No. 16-3306) 2 for \$4.82, plus postage (37c). Type 140. Weight, 4.5 oz. **2**

Wards Deluxe (Montgomery Ward's Cat. No. 16-3377) 2 for \$5.58, plus postage (43c). Type 180. Weight, 3.8 oz. Had 4.3% sizing, far above the 1.0% maximum allowed for a sheet of this type. **2**

Fieldcrest Duracale (Fieldcrest Mills) \$3.45 (51c). Type 180. Weight, 3.9 oz. Thread count in warp direction a little low for this type. **3**

Lady Pepperell (Pepperell Mfg. Co.) \$2.98 (48c). 81 x 99 in. Type 180. Weight, 3.7 oz. Percent of sizing slightly in excess of permissible maximum for this type. **3**

Wamsutta Supercare (Wamsutta Mills, New Bedford, Mass.) \$3.35 (50c). Type 200. Weight, 3.9 oz. Shrinkage in the warp direction, low (desirable). **3**

C. Not Recommended

Harmony House "Good" (Sears-Roebuck's Cat. No. 96-6682) 2 for \$3.82, plus postage (29c). Type 128. Weight, 4.4 oz. Shrinkage in warp direction, somewhat high (undesirable). Average breaking strength after 50 launderings, low in warp direction (46 lb.). **1**

Hope (Utica & Mohawk Cotton Mills, Inc.) \$2.39 (36c). Type 128. Weight, 4.2 oz. **2**

Corrections and Emendations to Consumers' Research Bulletin

Floor Seals
Page 23, Col. 2
May '50 Bulletin

The manufacturer of *McCloskey Tungseal* has written us saying that the price of \$2.35 per quart reported in our BULLETIN is much higher than the retail price he intended should be charged. The price reported in CR BULLETIN was

the dealer's quoted retail price for the quart can of *Tungseal* purchased and subjected to test by CR. Subsequently CR purchased two other quart cans of *Tungseal*; the retail price of one was \$1.95, of the other, \$1.40.

The Gloss of Art

CR's Study of 10 Nail Lacquers

ALTHOUGH the present-day colorful nail lacquers are a recent chemical development, beauty experts more than a century ago issued advice on coloring the nails. In a little book, entitled "The Toilette of Health, Beauty, and Fashion," published in Boston, 1833, the following suggestion is made:

To give a fine color to the nails, the hands and fingers must be well lathered and washed in scented soap, then the nails rubbed with equal parts of cinnabar and emery, and afterwards with oil of bitter almonds. By continuing this practice for a few days, the nails will be rendered smooth and transparent.

Cinnabar, also known as Chinese red or vermillion, is mercuric sulfide which is a poison. It is used as a pigment in paint and would have some slight coloring effect on the nails. The emery would, of course, smooth off any rough surfaces. The oil of bitter almonds may have served as an emollient for rough cuticle, although its use would be accompanied by some hazard. It is a poison which acts physiologically like one of its usual constituents, the very toxic hydrocyanic acid. It would appear that the effect achieved by this book's cosmetic advice could hardly have been worth the risks involved.

Nail lacquers of today are essentially solutions of nitrocellulose; they were introduced in the 20's. At first they were chiefly clear lacquer designed to give the nails a shiny finish with less effort than buffing them with zinc oxide. Later, various shades of red were added in the form of dyes dissolved in the solvents. Since a film of nitrocellulose is brittle and does not have good adhesion to the nail surface, various improvements were made in the early formula. Plasticizers were added to improve flexibility. Resins were used to improve luster and adhesion, and to increase resistance to soapy water. Then in order to increase the hiding power, about 12 years ago pigment colors were added to the formula to make the applied film of lacquer opaque. The coloring materials are selected which are fast to light and which have little tendency to stain the nails. The colors must be certified as safe for cosmetic use by the Food and Drug Administration in accordance with provisions of the Food, Drug, and Cosmetic Act.

The problem of turning out a satisfactory nail enamel is so complex technically that it is reported most cosmetic distributors entrust the manufacture of their nail lacquer to experienced paint and enamel makers. The differences in brands in many cases will be merely a matter of packaging and

color range. Some distributors also take pains to check each shipment of nail enamels to make certain that each batch is uniform and comparable to the original standard.

From the manufacturing standpoint, one trade expert lists four important factors in working out a successful formula. First, the raw materials used must be as free as possible from allergy-causing substances to which nails, cuticle, and skin may be unpleasantly sensitive. The resin is considered by some medical experts to be the chief offending substance, particularly if it is one of the formaldehyde-sulfonamide type. Other factors in turning out a satisfactory product are the method of dispersing the color pigments to give good suspension and avoid the settling of the color at the bottom of the container, development of a lacquer with a high gloss and good wearing quality, and ease of application.

The methods by which these characteristics are achieved and the particular materials used are chiefly of interest to chemists. The consumer is concerned with the results of the chemist's and the manufacturer's efforts. With this in mind, CR had 10 brands of nail lacquer subjected to a number of tests to evaluate their performance when applied to the fingernails, using controlled laboratory techniques and checked by actual use tests.

Samples of each brand were applied and evaluated for gloss or luster. The flexibility of the film of applied lacquer was determined by a bend test. Abrasion resistance was measured by a commercial abrasion tester. Adhesion and scratch resistance were tested, and the average drying time under test conditions of the various brands was determined. In addition, two tests were used to evaluate the water resistance of the enamels. One consisted of soaking applications of the enamel in cold and warm water, both plain water and water containing 0.3 percent of Glim, a synthetic detergent widely used for dishwashing, and checking for softening and whitening of the enamel at intervals. The other test involved the use of the Gardner Scrub Tester to measure the softening of the film.

On the basis of these tests, the 10 brands of nail lacquer were rated on a comparative basis. None of the lacquers was so poor in performance as to merit a *C-Not-Recommended* rating. It should be noted that the ratings are based on performance alone. No tests were made to determine toxicity of the lacquers, or possible allergic reactions from their use. The condition is such a comparatively new phenomenon so far as clinical observation is concerned that it has not yet been fully established

what the causes are and how to test for them. Prices shown do not include the 20 percent federal excise tax on cosmetics.

A. Recommended

Revlon Lastrom (Distributed by Revlon Nail Enamel Corp., 745 Fifth Ave., New York City) $\frac{1}{2}$ fl. oz., 60c (\$1.20 per oz.). *Certainly red*. Gloss or luster, very good. Flexibility, good. Abrasion resistance, good. Adhesion, good. Scratch resistance, very good. Relative drying time under the test conditions averaged 2.8 minutes (about average). Water resistance, very good, relatively very little whitening. 2

B. Intermediate

Cameo (Distributed by Cameo, Inc., Toledo, Ohio) $\frac{1}{4}$ fl. oz., 10c (40c per oz.). *Beau catcher*. Gloss or luster, good. Flexibility, fair. Abrasion resistance, relatively poor. Adhesion, good. Scratch resistance, very good. Relative drying time, 2.3 minutes (average, by various methods) (fastest of those tested). Water resistance, fair, relatively little whitening. 1

Cutex (Northam Warren Corp., 50 E. 57 St., N.Y.C.) $\frac{1}{4}$ fl. oz., 10c (40c per oz.). *Pink spangle*. Gloss or luster, very good. Flexibility, good. Abrasion resistance, very good (best of all brands tested). Adhesion, fair. Scratch resistance, fair. Drying time, 3 minutes (about average). Water resistance, very good, little whitening. 1

Cutex Nail Brilliance (Northam Warren Corp.) 2.5 fl. oz., 25c (62 $\frac{1}{2}$ c per oz.). *Robin red*. Gloss or luster, only fair (lowest of all tested). Flexibility, fair. Abrasion resistance, good. Adhesion, very good (best of samples tested). Scratch resistance, very good. Drying time, 2.5 minutes (slightly faster than average). Water resistance, good, little whitening. 1

Helen Neushaefer (Distributed by A. Sartorius & Co., College Point, N.Y.) 7/16 oz., 10c (23c per oz.). *Apple red with Plastene*. Gloss or luster, very good. Flexibility, good. Abrasion resistance, fair. Adhesion, relatively poor. Scratch resistance, fair. Drying time, 3.2

minutes (slightly slower than average). Water resistance, good, little whitening. 1

Chen Yu (Distributed by Chen Yu, Inc., Div. Richard Hudnut, 113 W. 18 St., N.Y.C.) $\frac{1}{2}$ fl. oz., 60c (\$1.20 per oz.). *Chinese red*. Gloss or luster, good. Flexibility, good. Abrasion resistance, relatively poor. Adhesion, good. Scratch resistance, very good. Drying time, 2.8 minutes (about average). Water resistance, good, little whitening. 2

Milkmaid Perfumed Nail Lacquer (Distributed by Milkmaid, Inc., 647 Fifth Ave., N.Y.C.) $\frac{1}{2}$ fl. oz., 60c (\$1.20 per oz.). *Red bud*. Gloss or luster, good. Flexibility, very good. Abrasion resistance, good. Adhesion, relatively poor. Scratch resistance, fair. Drying time, 3 minutes (about average). Water resistance, fair, little whitening. 2

Naylon (Distributed by La Cross Manicure Accessories, 682 S. 17 St., Newark, N.J.) $\frac{1}{2}$ fl. oz., 60c (\$1.20 per oz.). *Explosion*. Gloss or luster, good. Flexibility, good. Abrasion resistance, good. Adhesion, fair. Scratch resistance, good. Drying time, 2.8 minutes (about average). Water resistance, good, some whitening. 2

The following brands, while not so poor in performance as to warrant a *C-Not-Recommended* rating, were judged to be somewhat lower in performance than those immediately preceding the asterisks.

Dura-Gloss (Packed by Lorr Lab., Paterson, N.J.) 5/16 fl. oz., 10c (32c per oz.). *Red Plum*. Gloss or luster, good. Flexibility, good. Abrasion resistance, only fair. Adhesion, only fair. Scratch resistance, fair. Drying time, 3.3 minutes (slower than average). Water resistance, fair, some whitening. 1

Elizabeth Arden Nail Lacquer (Distributed by Elizabeth Arden, 681 Fifth Ave., N.Y.C.) $\frac{1}{2}$ fl. oz., \$1 (\$2 per oz.). *Red cactus*. Gloss or luster, good. Flexibility, very good. Abrasion resistance, only fair. Adhesion, relatively poor. Scratch resistance, fair. Drying time, 3.3 minutes (slower than average). Water resistance, fair, some whitening. 3

European Plate and Film-Pack Cameras

BECAUSE Continental 9 x 12 cm. plate and film-pack cameras have tended to be overlooked by prospective camera purchasers for some years, prices of used samples have dropped to reasonable levels — materially below those of comparable cameras of the so-called "press" type. A camera of the kind in question for 9 x 12 cm. pictures (a desirable size for general amateur use) in good condition, and fitted with a (pre-war) *Carl Zeiss Tessar*, *Voigtländer Skopar*, or similar f:4.5 lens of good quality can be purchased at from about \$20 to "as high as the traffic will bear," whereas a used *Speed Graphic*, for example, will cost twice as much, or even more, and *will not produce any better results*. A typical 9 x 12 cm. camera will have as accessories a film-pack adapter, and perhaps three single metal plateholders; the holders can be fitted

with sheaths to permit use of cut or sheet film. Alternatively, a spring back to take the ordinary American 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ in. cut-film holders used in "press" cameras can be purchased; or a competent repairman can adapt the camera to take *Graflex* accessories. Gadgets such as range-finders, flash equipment, and the like can be attached to one of these cameras as readily as to one of the much more expensive "press" cameras.

The foregoing also applies to 6.5 x 9 cm. cameras if obtainable with film-pack adapter, or if a spring back for 2 $\frac{1}{4}$ x 3 $\frac{1}{4}$ in. cut-film holders is added. Use of sheaths in plateholders is *not* practicable, because the cut film of that size (2 $\frac{1}{2}$ x 3 $\frac{1}{2}$ in.) is available only in a few types of emulsions and is difficult or impossible to find, in most cities.

Bathroom Scales

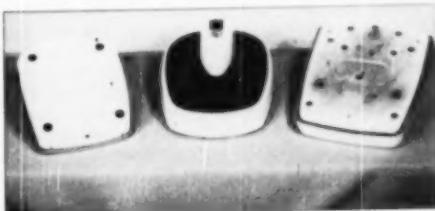
INCREASING IMPORTANCE is placed on maintaining the proper body weight as essential for general good health. The advent of modern dieting procedures and "calorie watching" has resulted in the sale of a very large number of low-priced bathroom scales through department stores, home furnishing stores, and the like. While only approximate accuracy is necessary for a bathroom scale, it is desirable that the error should not be unduly large, as wrong conclusions may be drawn for a time as to whether the consumer is gaining or losing weight, if the scale has a certain type of inaccuracy or has a defect which makes it insensitive to small weight differences.

For convenience, a bathroom scale should be small and compact and light in weight. Much more important, however, is that it should be sturdy and easy to read. In testing of the scales, considerable weight was placed upon the ease with which each could be read by the housewife or the man of the house, with, of course, chief stress upon the providing of a reasonable accuracy.

Some manufacturers are providing a magnifying lens section over the graduations on the scale dial so that the user's weight may be more easily read from normal standing position than with unaided vision. These magnifying lenses can be used accurately only when the lenses are properly placed with relation to the divisions on the scale.

Rubber-composition mats are provided on all the scales tested and are some assurance of a nonslip surface for bare and wet feet, and help prevent the rusting that would otherwise occur on the thin sheet metal of the scale platform. All scales had a knob or set-screw mechanism for correctly adjusting to the zero position of the dial. With some, as the ratings indicate, it was difficult to get a correct zero setting. None of the scales had provision to seal out moisture completely, hence if the scale is kept continuously in a damp space, interior parts may rust and bring about deterioration or loss of accuracy. All scales had some form of "feet" attached or stamped onto the bottom in order to make the scales more stable and less apt to slip or slide when in use. The rubber knobs are best for this purpose, and scales with mere metal bulges stamped out from the base metal are less secure against slipping or sliding on a wet or damp floor. They are more likely, also, to cause damage to linoleum or a finished floor surface.

The following scales used dots for 1-lb. divisions, which were found unsuitable except for users with exceptionally good vision or with visual errors well corrected by glasses: *Armaid*, *Continental Health-Weigh*, *Detecto*, *Harmony House*, and *Rexway*. De-



Bathroom scales showing solid and pierced bottom plates.

signs in which there is space available for fine graduations to single pounds, e.g., *Borg*, *Health-O-Meter*, and *Wards*, are to be preferred, but for most users there would be no objection to 2-lb. divisions, present in *Counselor*.

Among the scales considered to be most readable under conditions of use in the bathroom are: *Armaid*, *Borg*, *Continental Health-Weigh*, *Counselor*, *Health-O-Meter*, and *Wards* (although the 1-lb. graduations of the *Armaid* and *Continental Health-Weigh* were not readable, as previously noted).

All scales were tested with weights stacked on accurately placed wooden "feet" that were set on the platform. Graduations were to 1 lb., except where otherwise noted (*Counselor*).

Prices varied from \$5 to \$7, and there was no noticeable relationship between the price and the accuracy of the scale (the *Borg* scale, which was the highest in price, gave no better accuracy than the *Armaid*, which was \$4.98).

B. Intermediate

Continental Health-Weigh (Continental Scale Corp., 5701 S. Claremont Ave., Chicago; Montgomery Ward's Cat. No. 86-10741.) \$4.98. Pressed indentations for feet, undesirable. $13\frac{1}{4} \times 10 \times 5\frac{9}{16}$ in. 250-lb. capacity. Magnifying lens correctly set over divisions on dial, good. Ridged rubber platform surface. Knobbed wheel for zero setting, adjustable from -12 to +30 lb. Lines used for 2-lb. divisions. 1-lb. divisions not readable from standing height, undesirable. Accuracy: good, with errors from $-1\frac{1}{2}$ to $+2$ lb. This scale was considered the most conveniently readable in the group tested. 1

Counselor (The Brearly Co., Rockford, Ill.) \$4.98. Pressed indentations for feet, undesirable. $11\frac{5}{8} \times 9\frac{3}{8} \times 3$ in. 310-lb. capacity. Smooth rubber platform surface. Knobbed wheel for zero setting, zero adjustable from more than -50 to +50 lb., good. 2-lb. divisions, readily readable from standing height. Accuracy: fairly good, with errors from $-1\frac{1}{2}$ to $+2\frac{1}{2}$ lb. 4

Health-O-Meter (Continental Scale Corp., 5701 S. Claremont Ave., Chicago 36) \$4.98. Pressed indentations

for feet, undesirable. $11\frac{3}{8} \times 9\frac{3}{16} \times 3$ in. 260-lb. capacity. Magnifying lens poorly placed (over numbers instead of divisions on dial, undesirable). Smooth rubber platform surface. Notched wheel for zero setting, adjustable from more than -50 to +20 lb., good. Accuracy: fair, with errors from -1 to +3 lb. **1**
Harmony House (Sears-Roebuck's Cat. No. 11-07884) \$5.49. Metal disk feet, undesirable. $12\frac{5}{8} \times 10\frac{1}{4} \times 5\frac{1}{2}$ in. 250-lb. capacity. Lens correctly placed over divisions on scale, but badly clouded (unclear). Ridged rubber platform surface. Knobbed wheel for zero setting, with zero adjustable from -10 to +4 lb. 1-lb. divisions not readable from standing height. Accuracy: good as these scales go, with errors running from $+3\frac{1}{2}$ to +2 lb. **2**

C. Not Recommended

Armaid (Purchased at Lit Bros., 69th and Market Sts., Philadelphia) \$4.98. Pressed indentations for feet, undesirable. $13\frac{3}{4} \times 9\frac{7}{8} \times 5\frac{1}{8}$ in. 250-lb. capacity. Dimpled rubber platform surface. Knobbed wheel for zero setting, adjustable from -10 to +5 lb. 1-lb. divisions not readable from standing height (undesirable). Accuracy: very poor, with errors from -7 to +1 lb. **1**
Borg, Model 812C (Borg Erickson Corp., 469 E. Ohio St., Chicago 11) \$6.95. Rubber disk feet, a desirable type. $11 \times 9\frac{1}{4} \times 2\frac{3}{4}$ in. 260-lb. capacity. Magnifying lens poorly placed (over numbers instead of di-

visions on dial, undesirable). Smooth rubber platform surface. Directions on the scale imply that the zero setting is permanently valid; this was not true, and the scale actually had a screw-set zero adjustable from -10 to +50 lb. 1-lb. graduations, easily readable from standing height. Accuracy: very poor, with errors from $-7\frac{1}{2}$ to $+3\frac{1}{2}$ lb. **3**

Detecto (Detecto Scales Inc., Div. Jacob Bros. Co., Inc., Brooklyn 5, N. Y.) \$6.95. Pressed indentations for feet, undesirable. $12\frac{5}{8} \times 10\frac{1}{4} \times 5\frac{1}{2}$ in. 250-lb. capacity. Magnifying lens correctly placed over divisions on dial, but cloudy (unclear). Ridged rubber platform surface. Knurled wheel for zero setting, adjustable from -30 to +50 lb., good. 1-lb. divisions not readable from standing height. Accuracy: fair, with errors from -4 to $+2\frac{1}{2}$ lb. **3**

Rexway, Model 4839II (Rexway Scale Co., Rockford, Ill.) \$6.95. Pressed indentations for feet, undesirable. $11\frac{3}{8} \times 10\frac{1}{2}, 16 \times 5\frac{1}{8}$ in. Used magnifying lens which was correctly placed over divisions on dial, but cloudy (unclear). Smooth rubber platform surface. Knobbed wheel for zero setting, adjustable from -30 to +45 lb. 1-lb. divisions not readable from standing height. Accuracy: poor, with errors from -6 to $+3\frac{1}{2}$ lb. **3**

Wards (Montgomery Ward's Cat. No. 86-10711) \$6.98. Rubber feet, desirable. $11\frac{9}{16} \times 9\frac{1}{4} \times 2\frac{11}{16}$ in. 260-lb. capacity. Magnifying lens poorly placed. Smooth rubber platform surface. Screw-type zero setting, zero adjustable from -10 to over +50 lb. Accuracy: very poor, with errors from $-6\frac{1}{2}$ to $+1\frac{1}{2}$ lb. **3**

Betsy Ross Toy Sewing Machine



TOYS for children are essential for happy play, and they also perform valuable functions in the child's mental and physical development. Parents who are thoughtful about the play materials which they provide for their children usually notice that when a girl reaches her later childhood (about 10 to 13 years of age) she is likely to give increasing attention to life about her and begins to acquire skill and dexterity in the things she does. Girls of this age often make doll's clothes which are careful, detailed reproductions of garments worn by real people. Such little women would often like to use mother's or grandmother's sewing machine. For a girl in this age group the *Betsy Ross* miniature electric portable sewing machine would undoubtedly be an interesting toy. This small machine is less than a foot in height and weighs only eight pounds, complete with case. It is not particularly difficult to use, for it makes a chain stitch and so has no bobbin, but only a single spool of thread. (A chain stitch has a chain-like appearance on the underside of the cloth.)

Threading the machine by following the directions provided by the distributor is simple and

easy. The *Betsy Ross* is also easy to use for sewing. It feeds the cloth and guides it to a certain extent, and is much easier to use in this respect than some toy sewing machines which use a hand crank.

The motor is controlled by a simple switch which is pushed to start the machine, and pushed again to stop it. With such a switch a child is not likely to become confused by having too many controls to think about. The switch has another advantage in that it is easy to turn the machine off in case the thread jams.

The buyer should be careful, however, to obtain a *Betsy Ross* machine that is known to be in good working order. The particular one tested by Consumers' Research would not sew at all as received. A sewing machine expert was able to adjust it, but not without some difficulty, and it was considered unlikely that the average consumer would be able to make the adjustments this particular machine required.

Once the machine was adjusted, it sewed quite well on rayon, muslin, and drill fabrics. It was found, however, that the tension had to be changed for different kinds of cloth, for different stitch lengths, and for different kinds and weights of thread. Furthermore, even when the tension was set properly for the length of stitch, the kind of thread, and the kind of fabric being sewed, it did not hold constant at that setting. For general sewing in the home, this need for adjusting the tension made use of the machine impractical.

This need for changing the tension for different kinds of material also greatly lessened its attractiveness as a toy. One 13-year-old girl who used it was able to make the adjustments required, but

it took about six trials before the adjustment was made correctly. (An experienced adult needed as many trials.) During the trials, the thread jammed around the mechanism and had to be loosened, and sometimes the material was drawn down into the needle slot. One mother thought the difficulty of adjusting the tension properly would tend to discourage a child from wanting to learn to sew with a regular sewing machine.

The tension nut unfortunately did not have a marker on it — a great disadvantage since it was necessary, as already noted, to adjust the tension often. In CR's tests a mark was applied for greater convenience. The manufacturer should, of course, provide a suitable reference mark.

The machine did not move around on the table in use, and it was likewise not particularly objectionable from the noise standpoint. The motor appeared to be sufficiently sturdy and got only slightly warm when sewing on drill material. No provision and no instructions were provided for oiling. This was considered a disadvantage and might lead to early wear.

B. Intermediate

Betsy Ross Miniature Electric Portable Sewing Machine
(Sold by Goldsmith Bros., 77 Nassau St., New York 8)
\$19.95, including carrying case. A toy sewing machine, about 9 x 6 x 9 in. Weight, 8 lb. Made a chain stitch. Required adjusting tension for different kinds of cloth, different stitch lengths, and different kinds and weights of thread. When properly adjusted, performed satisfactorily in sewing tests, for a toy sewing machine. Satisfactorily withstood the standard tests for current leakage and proof voltage.

Off the Editor's Chest

(Continued from page 2)

by the fact that General Electric Co., Westinghouse Electric Corp., Sunbeam Corp., and several other appliance manufacturers have recently been forced by the protests of small appliance dealers to bring suits to restrain various large department stores and discount outlets from selling appliances at reduced prices, in some cases 20 percent below those set as the "fair trade" or manufacturer-fixed retail price. If General Electric Co. is successful in requiring stores that have drastically

reduced the prices of GE products to increase them to "fair trade" levels, the consumer will be the loser. The Federal Department of Justice will not take any steps to proceed against the companies involved for illegal price fixing under the Sherman Anti-Trust Act, yet enforcement of fair trade rules on resale price maintenance by the manufacturers will be to the disadvantage of the consumer's pocketbook in just as real and practical a sense as though the executives of GE, Westinghouse,

Sunbeam, and the rest had fixed prices "horizontally" by sitting around a conference table and coming to an agreement on the prices they would thereafter charge for their electric irons, toasters, and other appliances.

In informed circles, there has been growing for some time the suspicion that the federal government is using anti-trust suits to break up concentrations of industrial power on the theory that the large corporations might conceivably get too difficult to control, compared with little enterprisers, i.e., could perhaps successfully resist governmental acts to bring them to heel, economically, and *might* in due course be in a position to exercise a degree of monopoly control in their particular fields. There is, as might be expected, some disagreement in federal government circles as to whether bigness in industry is undesirable *per se*. Federal rulings, judicial decisions, and economic thinking are so confused and conflicting that executives of large corporations quite justifiably find themselves perplexed as to what policies and actions the federal government is likely to hold constitute anti-trust violations.

Some recognition of this confusion was reflected by Secretary of Commerce Charles Sawyer in a speech in which he made the point that the situation calls for evolving a new and modern definition of effective competition and then we should "see if our legal situation conforms to the real-life facts which we have discovered." He suggested that one test of "effective competition" was "whether the business performance in such competition serves the public interest in increasing values in goods and services for more people." This provides a fairly good yardstick for the consumer to use in evaluating the government's various anti-trust cases and propaganda campaigns. The question to ask is: have the companies in question really acted against the consumer's economic interests?

Will the consumer be better served, at lower prices, if the federal government is able to split A. & P. into seven regional chains, the four big meat packers into fourteen independent companies, and to divide Western Electric into three firms as demanded by the Department of Justice? The government has spent a lot of taxpayers' money instituting these and a number of other suits — and the companies have spent considerable sums in preparing their defense. Has the consumer who really pays for the outlay on both sides actually benefited, or would the government have rendered better service by going after such obvious monopolistic practices that have worked hardship on consumers as the "stabilizing" of prices of coal by the "work stoppages" of the United Mine Workers, the refusal to permit the use of a number of production shortcuts and inexpensive materials by the building trade unions, the unnecessarily high cost of home delivery of milk due to the \$12,000-to-\$15,000-

a-year wages of the milk handlers in St. Louis? Likewise, the artificially high prices of potatoes, flour, and milk produced by government price controls, subsidies, and crop diversion and destruction practices. In each of the instances cited consumers have been charged exorbitant prices for the products involved solely on account of monopolistic controls imposed on the market, but they happened to be by monopolists the government favors rather than those it publicly attacks as enemies of the people.

The prevention of gouging of consumers by the use of arbitrary and monopolistic power to control any segment of the market is undoubtedly the idea that motivated the framers of the Sherman Anti-Trust Act when they drafted the legislation. That principle is one that clear-thinking voters will do well to bring forcibly to the attention of their legislators and candidates for office in the current political campaign, making it unmistakably clear that they expect that federal policy in anti-trust matters shall be guided by the test of whether *any agency, corporation, trade association, labor union, government department, or other group is exercising monopoly power to the detriment of the consumer's pocketbook and welfare.*

Consumers may properly regard as campaign propaganda anti-trust suits against big companies which appear to be serving consumers well or turning out a good product, competitively priced. The bigger the company, of course, the better the play the action will be given in the public press, and the federal attorney will easily appear as David attacking an evil Goliath.

This country has magnificent productive capacity, by which alone we were enabled in the last war to equip not only ourselves but our allies as well, to produce more goods indeed than all our allies combined. The assembly-line technique of mass production, which is the efficient and economical way to turn out refrigerators, washing machines, vacuum cleaners, radio sets, and the host of other home appliances which contribute to the comfort of daily living is workable in many industries only in big operations, conducted on a huge scale. To hold up as an ideal the splitting up of industries into small units is an economic step backward toward the days of William Morris and his handicraft coterie of the last century. The test is not the size of an organization but whether or not the over-all effect of its activity is to restrain output, keep prices up, prevent the use of new machinery which will reduce prices to the consumer, or to delay the production or distribution of new products and services. Consumers should insist on that yardstick as a basis for determining how the Department of Justice and the Federal Trade Commission shall spend taxpayers' money in instituting government action against alleged monopolies.

"Quadruple Silvaplate"

Editor's Note: In the January 1933 Bulletin and again in May 1938, Consumers' Research mentioned quick "plating compounds" for home use. Two of these, La-Chrom and Metalloy, were not chrome plate but put an amalgam of mercury, a highly poisonous metal, upon spoons and other kitchen utensils to which they were applied. In 1937, Consumers' Research received an analysis of a product called Chrom Plate, which contained a small fraction of 1% of silver (as silver cyanide), 1.1% potassium cyanide, and 54.5% calcium carbonate (chalk). A similar composition had been found previously for a product called New Chrom Plate.

It was noted in the 1933 article that the materials with which it is safe to plate cooking and eating utensils are few, and that mercury falls about as far outside that class as it is possible to imagine.

In the May 1938 Bulletin, it was mentioned that some silver polishes contain chemical substances which dissolve tarnish, but that potassium cyanide, formerly commonly used for this purpose, was no longer being put into polishes for use in the home. The reason was that cyanides are much too deadly poisons to find any use whatever in the household. It was noted further that while the use of cyanides is common in hotels for cleaning silverware, "occasional cases have occurred of serious poisoning of people using the silverware soon after it was cleaned." Another method of cleaning silverware used lead "points"; in this method the ware was tumbled in a revolving container. The points wore off the surface tarnish but obviously left a certain degree of deposit of metallic lead, likewise most undesirable from the standpoint of health. The accompanying article indicates that cyanides are back with us again in a product for home use connected with silverware; consumers who are careful of the safety of themselves and their children will not wish under any circumstances to use a cyanide-containing product, or to keep it in the home.

ONCE AGAIN a silver-plating solution has been placed on the market claiming an "original" formula that "instantly renews the silver-plating on copper, brass, bronze, nickel-silver and other metal articles. Moreover," the manufacturer claims, "Quadruple Silvaplate contains pure silver" and need only be rubbed on any article to be replated in order to achieve a coating of silver that will make it unnecessary ever to plate the article again. . . if you continue to use Silvaplate." Quadruple Silvaplate also "will not wash off," hardly a remarkable attribute for any "silver plate" that could *properly* use the term, and the manufacturer contends that "The more you rub, the more it plates," a claim of no particular significance, as will appear later.

Upon laboratory analysis it was found that Silvaplate did contain pure silver, but a whole 4 fluid ounce bottle contained only about 0.73 grams, or a little less than enough silver to plate one teaspoon of so-called "doubleplate" quality, a poor grade of plated ware sold to manufacturers for a few cents to be used as a premium with cereals. The advertising claim that consumers can save "\$100 worth of plating with an 8 fluid ounce bottle" (or \$50 worth with 4 fluid ounces) of Silvaplate is obviously wholly unwarranted. It is interesting to note that the silver plate on this so-called

"doubleplate" quality silverware is roughly 40 times as thick as the plate resulting when a product working on the principle of the Silvaplate mixture is used.

It is doubtful that Silvaplate is an "absolutely original formula" as the manufacturer claims, since materials containing silver cyanide and an alkali cyanide plus a mild abrasive have been in use for probably at least 100 years, white grained silver watch dials being a typical example of their application.

The label on a bottle of Silvaplate warns: "SILVAPATE contains a cleaning agent (SODIUM CYANIDE) and like other household POISONS (ammonia, etc.) should be KEPT FROM CHILDREN." The labeling goes on to say that this "household poison" should be "kept away from mouth and eyes," and the manufacturer warns further that "the application cloth should be disposed of after use," and that in order to "prevent stains on fingers after prolonged use" or "if hands have irritated cuticle or cuts" the user should wear rubber gloves. These precautions represent a gross understatement of the actual and potential hazards in the use of cyanides and doubtless the wording has been chosen to quiet any suspicion in the user's mind that he may be exposing himself to an exceedingly dangerous material. Actually, based on a minimum lethal dose

REPLATE YOUR SILVER

with this remarkable silver plating polish that contains pure silver. Just rub on to restore worn Sheffield instantly, and plate any article having copper, brass or bronze base. Save \$100 worth of plating with an 8 oz. bottle, \$7; 4 oz. bottle \$3.90. W. of Miss. add 25¢.

Reproduction of an advertisement of Silverplate in a popular magazine. The bottle is pictured at the right.

of 60 to 80 milligrams of cyanide for an average adult, a 4-fl.-oz. bottle of *Silverplate* contains sufficient cyanide to kill 10 men. It is grossly misleading to place a poison of this character in the same category as "ammonia and other household poisons." In fact, post-office regulations prohibit shipping such products through the mail, which is sufficient recognition of the reality of the dangers involved in the handling of cyanide.

The silver deposit produced by this process is known technically as an "immersion" or "displacement" deposition. Contact of the solution with a metal dissimilar to silver is necessary for the reaction to continue, and when the surface is coated with an extremely thin film of silver, the reaction practically ceases. The silver coating possible from formulas of this type is of the order of a few millionths of an inch thick and, of course, will not withstand use or abrasion for any length of time. If protected from the atmosphere by lacquering or waxing, it would serve as a mere appearance coating for articles which are *not handled*; it would have no practical use for coating table silverware, sugar bowls, coffeepots, or most other household utensils. Yet the manufacturer advertises *Silverplate* for "restoring Sheffield, and silver plating any article having copper, brass or bronze base."

Analysis of this product showed it to contain 0.6% silver, 1.1% sodium cyanide, 78.2% water; the balance, used as a mild abrasive to facilitate application of *Silverplate*, appeared to be precipitated chalk. If the constituents named were to be purchased from a laboratory supply house in



small quantities, the value of the ingredients of the 4-fl.-oz. bottle, retailing at \$4, plus postage, would be about 6 cents; large-scale purchases, such as a manufacturer requires, would make the initial cost of materials very much less.

The selling power of such products comes from the appeal to the reader of the advertising which implies that *Silverplate* is able to do a good job of silver plating or replating his tableware, coffeepot, or other household utensils, when in reality this product will produce only an exceedingly thin silver coating, such as would serve to refinish a headlight reflector on old-model cars, or to finish a piece of handmade ornament made by a hobbyist, which could be lacquered to give it the slight protection it might need against tarnish and abrasion. Simple formulas are given below which are toxic, and hence should be carefully labeled as poisonous and should not be left where children can handle them, but are not nearly as dangerous as formulas containing cyanide.

1. Silver nitrate or chloride.....	1 part
Tartaric acid or cream of tartar.....	2 "
Table salt.....	2 "
Precipitated chalk.....	20 "
Water.....	75 "
2. Silver nitrate.....	2 parts
Table salt.....	1 "
Photographer's hypo.....	4 "
Sufficient water and precipitated chalk to make a thin paste.	

C. Not Recommended

Silverplate (Orange Mfg. Co., Sole Distributors, 1300 Madison Ave., New York 28; sold by Little Grey Gift Shop, 1300 Madison Ave., New York 28, as advertised in House & Garden and other magazines, and in newspapers, 8-oz. bottle, \$7; 4-oz. bottle, \$3.90. The product was a suspension of mild abrasive, in a solution of sodium cyanide (extremely poisonous), and a very small amount of pure silver, about enough to provide a thin plate on 1 low-quality teaspoon (if the silver were applied by a proper and effective method of plating). Considered ineffective as a plating agent for silver or other metal articles, except for certain very unusual requirements (as mentioned in the text). Enormously overpriced, considering ingredients and utility.

In Buying Furniture

HOW TO SELECT good, substantial, comfortable, attractive pieces of furniture is a problem that confronts every newly-wed and some others. Those who have mastered the technique of what to look for in quality furniture — corner glue blocks in chairs glued and screwed to chair rails, accurately fitted joints, backs of "case goods" fastened by escutcheon screws, and dovetailed drawer sides (to mention just a few) — will be discouraged to learn that new methods of construction

may make their hard-won knowledge obsolete. Steel frames, reports The Wall Street Journal, are taking the place of wooden ones. Construction is being carried out on a conveyor, production line basis; with a stitching machine stapling roll padding to upholstered pieces where hand stitching was used before. Plastics and aluminum are being used in chest drawers. Furniture men predict that by modernizing their production methods they will be able to reduce prices to the consumer materially.

RATINGS of MOTION PICTURES

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, Chain, Chicago Daily Tribune, Cine-Daily News (N.Y.), The Exhibitor, Harrison's Report, Motion Picture Herald, National League of Drama, Life, Look, New York Herald Tribune, New York Times, Parents' Magazine, Release of the D.A.R., Preview Committee, Successful Farming, Time, Variety (weekly), Weekly Guide to Selected Motion Pictures (National Board of Review of Motion Pictures, Inc.), and Unbiased Opinions of Current Motion Pictures which includes reviews by the General Federation of Women's Clubs, the American Legion Auxiliary, National Film Music Council, and others.

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), or C (not recommended) on its entertainment values.

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

ad—adventure	hist—historical
bio—biography	mel—melodrama
c—in color (Technicolor, Cinecolor, etc.)	mus—musical
Tricolor, Magnacolor, Vitavcolor, etc.)	mys—mystery
com—comedy	rom—romance
cri—crime and capture of criminals	soc—social problem drama
doc—documentary	tra—travelogue
dr—drama	war—dealing with the lives of people in wartime
fan—fantasy	west—western

A	B	C	
—	3	5	Admiral Was a Lady, The <i>mus-com A</i>
—	2	4	Angels of the Streets <i>dr A</i>
—	5	—	Anna of Rhodes <i>mus-dr A</i>
9	9	—	Annie Get Your Gun <i>mus-com-c A</i>
—	2	4	Arizona Cowboy, The <i>mus-wes AVC</i>
5	2	—	Armored Car Robbery <i>cri-mel A</i>
3	11	2	Asphalt Jungle, The <i>mel A</i>
10	9	—	Astonished Heart, The <i>dr A</i>
—	1	4	Avengers, The <i>mel A</i>
5	5	—	Backfire <i>mel A</i>
5	5	—	Baron of Arizona, The <i>hist-mel A</i>
3	10	—	Barricade <i>cri-mel-c A</i>
7	2	—	Beauty on Parade <i>dr A</i>
2	6	—	Belle of Old Mexico <i>mus-com-c A</i>
8	2	—	Bells of Coronado <i>mus-wes-c AVC</i>
4	—	—	Between Eleven and Midnight <i>mys-mel A</i>
1	3	—	Beware of Blondie <i>com AVC</i>
3	—	—	Beyond the Purple Hills <i>mus-wes-c AVC</i>
1	4	10	Big Hangover, The <i>com A</i>
4	8	—	Big Lift, The <i>war-dr AV</i>
1	8	5	Black Hand, The <i>cri-mel A</i>
1	1	6	Blonde Dynamite <i>mel A</i>
—	3	—	Blood and Fire <i>dr A</i>
3	7	—	Blue Grass of Kentucky <i>dr-c AVC</i>
7	2	—	Blue Lamp, The <i>cri-dr A</i>
5	1	—	Bomb and the Lost Volcano <i>mel AVC</i>
4	6	—	Bond Street <i>dr A</i>
1	4	5	Border Street <i>war-dr A</i>
3	3	—	Boy from Indiana <i>mel A</i>
6	10	—	Bright Leaf <i>dr A</i>
4	6	1	Broken Arrow <i>dr-c AVC</i>
5	9	—	Buccaneer's Girl <i>mus-mel-c A</i>
			Caged <i>9</i>
			Call of the Forest <i>2</i>
			Captain Carey, U.S.A. <i>5</i>
			Captive Girl <i>3</i>
1			Capture, The <i>9</i>
			Cargo to Capetown <i>7</i>
			Cariboo Trail, The <i>2</i>
			Catskill Honeymoon <i>2</i>
2			Chain Lightning <i>11</i>
			Champagne for Caesar <i>4</i>
2			Cheaper by the Dozen <i>11</i>
			Child of Man <i>1</i>
			Children of Chaos <i>3</i>
			Code of the Silver Sage <i>6</i>
			Colorado Ranger <i>4</i>
			Colt .45 <i>5</i>
1			Comanche Territory <i>8</i>
			Congolaise <i>3</i>
			Covered Wagon Raid <i>1</i>
			Cowboy and the Prize-fighter, The <i>5</i>
			Cowtown <i>7</i>
			Crisis <i>6</i>
			Cry Murder <i>1</i>
10			Curtain Call at Cactus Creek <i>10</i>
			Customs Agent <i>3</i>
			Dakota Lil <i>5</i>
			Damned Don't Cry, The <i>6</i>
1			Daughter of Rosie O'Grady, The <i>9</i>
			David Harding, CounterSpy <i>6</i>
			Daybreak in Udi <i>4</i>
			Destination Big House <i>2</i>
10			Destination Moon <i>10</i>
			Destination Murder <i>1</i>
			Devil's Doorway <i>3</i>
1			D.O.A. <i>7</i>
			Duchess of Idaho <i>6</i>
			Dynamite Pass <i>5</i>
			Eagle and the Hawk, The <i>6</i>
			Edge of Doom <i>1</i>
			Escape into Dreams <i>2</i>
			Everybody's Dancin' <i>4</i>
			Father is a Bachelor <i>5</i>
			Father Makes Good <i>8</i>
			Father of the Bride <i>1</i>
			Faust and the Devil <i>12</i>
			Federal Agent at Large <i>2</i>
			Federal Man <i>2</i>
			Fence Riders <i>4</i>
			50 Years Before Your Eyes <i>10</i>
			Fighting Stallion, The <i>2</i>
			Flame and the Arrow, The <i>6</i>
			Forbidden Jungle <i>5</i>
			Foreign Legion, The <i>2</i>
			Fortunes of Captain Blood, The <i>5</i>
			Four Days Leave <i>4</i>
			Frightened City <i>2</i>
			Frontier Outpost <i>3</i>
			Furies, The <i>3</i>
			Gates of the Night <i>1</i>
			Gigi <i>3</i>
			Girl from San Lorenzo, The <i>4</i>
			Girls Behind Bars <i>3</i>
			Golden Gloves Story, The <i>6</i>
			Golden Salamander <i>4</i>
			Golden Twenties, The <i>8</i>
			Good Humor Man, The <i>9</i>
			Good Time Girl <i>5</i>
			Great Jewel Robbery, The <i>5</i>
			Great Plane Robbery, The <i>2</i>
			Gullity Bystander <i>8</i>
			Gun Fighter, The <i>10</i>
			Gunmen of Abilene <i>2</i>
			Gunmen of Abilene <i>4</i>

A	B	C		A	B	C	
6	2	Happy Years, The	<i>com-c AYC</i>	4	1	Red Meadows	<i>propaganda-dr A</i>
5	3	Harbor of Missing Men	<i>mel AY</i>	14	3	Reformer and the Redhead, The	<i>com AYC</i>
5	—	Heart and Soul	<i>dr A</i>	3	2	Return of the Black Eagle	<i>mel A</i>
3	9	Her Wonderful Lie	<i>mus-dr A</i>	7	4	Return of the Frontiersman	<i>wes AYC</i>
4	4	Hil-Jacked	<i>cri-mel A</i>	4	1	Rider from Tucson	<i>wes A</i>
4	1	Hills of Oklahoma	<i>mus-wes AYC</i>	3		Rita	<i>mel A</i>
2	7	Hoedown	<i>com AYC</i>	10	2	Rock Island Trail	<i>mus-mel-c AYC</i>
3	2	Hostile Country	<i>wes AYC</i>	6	5	Rocketship XM	<i>mel AYC</i>
5	9	House by the River	<i>mys-mel A</i>	1	9	Rocking Horse Winner, The	<i>dr A</i>
1	5	Humphrey Takes a Chance	<i>com AYC</i>	5	3	Rogues of Sherwood Forest	<i>adv-c AYC</i>
6	5	I Was a Shoplifter	<i>cri-dr A</i>	3	4	Royal Affair, A	<i>com A</i>
1	5	If This Be Sin	<i>dr A</i>	12	3	Rules of the Game, The	<i>com A</i>
7	4	Il Trovatore	<i>mus-mel A</i>	2	5	Run for Your Money, A	<i>com AYC</i>
1	10	In Lonely Place	<i>mel A</i>	6	6	Salt Lake Raiders	<i>wes AYC</i>
2	2	Invisible Army, The	<i>war-dr A</i>	2	2	Sarumba	<i>mus-com A</i>
5	2	Iroquois Trail, The	<i>nov AYC</i>	4	2	Scavenger Horde, The	<i>wes AYC</i>
5	3	It's a Small World	<i>dr A</i>	9	6	Secret Fury, The	<i>com A</i>
1	10	Jackie Robinson Story, The	<i>biog AYC</i>	6	3	711 Ocean Drive	<i>mel A</i>
4	3	Jiggs and Maggie Out West	<i>com AYC</i>	5	8	Shadow on the Wall	<i>cri-mel A</i>
5	2	Joe Palooka Meets Humphrey	<i>mel AYC</i>	3	2	Sideshow	<i>mys-mel A</i>
1	7	Johnny One Eye	<i>dr A</i>	6	4	Sierra	<i>dr AYC</i>
8	7	Key to the City	<i>com A</i>	3	3	Sin of Anna Lans, The	<i>mus-wes-c AYC</i>
5	8	Kid from Texas, The	<i>wes-c A</i>	8	4	Singing Guns	<i>dr A</i>
6	6	Kill or Be Killed	<i>cri-mel A</i>	6	7	Skipper Surprised His Wife, The	<i>com AYC</i>
7	5	Kill the Umpire	<i>com AYC</i>	3		Sleeping City, The	<i>cri-mel A</i>
5	1	Killer Shark	<i>mel A</i>	4		So Long at the Fair	<i>mys-mel A</i>
1	11	Kind Hearts and Coronets	<i>com A</i>	5	3	So Young, So Bad	<i>dr A</i>
3	2	Lady Without Passport, A	<i>...dr A</i>	6		Spy Hunt	<i>mel AYC</i>
1	4	Laughing Lady, The	<i>mus-ds-c A</i>	2	4	Square Dance Katy	<i>mus-com A</i>
12	2	Lawless, The	<i>soc-dr A</i>	1	14	Stage Fright	<i>cri-mel A</i>
1	2	Lenin	<i>doc-biog A</i>	2	9	Stars in My Crown	<i>dr AYC</i>
1	6	Louisa	<i>com AYC</i>	3	4	State Penitentiary	<i>mel A</i>
1	2	Love of a Clown	<i>mus-dr A</i>	4	3	Storm Over Wyoming	<i>wes AYC</i>
8	6	Love that Brute	<i>com A</i>	3		Storm Within, The	<i>dr A</i>
4	1	Lucky Lovers	<i>mel A</i>	5	6	Sunset Boulevard	<i>cri-mel A</i>
6	2	Ma and Pa Kettle Go to Town	<i>com AYC</i>	1	2	Tainted	<i>dr A</i>
2	4	Mad About the Opera	<i>mus-dr A</i>	3	5	Tarnished	<i>dr A</i>
4	1	Madeleine	<i>cri-dr A</i>	5		Tarzan and the Slave Girl	<i>adv AYC</i>
4	2	Mafia	<i>dr A</i>	2	8	Tattooed Stranger, The	<i>cri-mel AYC</i>
4	6	Mark of the Gorilla	<i>mel VC</i>	11	3	Texas Dynamo	<i>mus-wes-c AYC</i>
4	9	Men, The	<i>war-dr A</i>	2	8	This Side of the Law	<i>mel A</i>
3	2	Messenger of Peace	<i>dr AYC</i>	2	4	Three Came Home	<i>war-dr A</i>
1	8	Military Academy	<i>dr AYC</i>	1	4	Three Little Words	<i>mus-com-c AYC</i>
1	3	Modern Marriage, A	<i>doc-dr A</i>	2	11	Ticket to Tomahawk, A	<i>mus-wes-c AYC</i>
3	3	Monelle	<i>dr A</i>	2	8	Torch, The	<i>dr A</i>
9	6	Mother Didn't Tell Me	<i>com A</i>	1	3	Trail of the Rustlers	<i>mus-wes AYC</i>
5	2	Motor Patrol	<i>cri-mel AY</i>	2	7	Treasure Island	<i>non-c AYC</i>
1	4	Mrs. Fitzherbert	<i>hist-dr A</i>	4	1	Twilight	<i>mus-wes-c AYC</i>
3	3	Mule Train	<i>mus-wes-c AYC</i>	2	1	Twilight in the Sierras	<i>dr A</i>
6	2	My Friend Irma Goes West	<i>mus-com A</i>	8	1	Tyrant of the Sea	<i>mus-wes-c AYC</i>
4	4	Mystery at the Burlesque	<i>mus-mel A</i>	3	6	Under My Skin	<i>mel A</i>
1	7	Mystery Street	<i>cri-mel A</i>	7	7	Unmasked	<i>dr A</i>
4	4	Naked Woman, The	<i>...dr A</i>	3	2	Union Station	<i>mel A</i>
1	9	Nancy Goes to Rio	<i>mus-com-c A</i>	7	7	Vanishing Westerner, The	<i>cri-dr A</i>
4	6	Next Voice You Hear, The	<i>dr AYC</i>	2	6	Vicious Years, The	<i>wes AYC</i>
7	7	Night and the City	<i>mys-mel A</i>	5	3	Victors and the Vanquished, The	<i>war-dr A</i>
8	8	No Man of Her Own	<i>mel A</i>	1	4	Voice of Love, The	<i>mus-dr A</i>
3	10	No Sad Songs for Me	<i>dr A</i>	1	2	Wabash Avenue	<i>mus-com-c A</i>
3	3	O Sole Mio	<i>mus-dr A</i>	7	11	Wagonmaster	<i>mus-wes-c AYC</i>
2	7	Once a Thief	<i>mel A</i>	1	7	Walls of Malapaga, The	<i>dr A</i>
4	8	Once Upon a Dream	<i>com A</i>	2	3	West of the Brazos	<i>wes AYC</i>
6	8	One Way Street	<i>cri-mel A</i>	4	2	West of Wyoming	<i>mys-mel A</i>
1	3	Operation Haylift	<i>dr AYC</i>	5	3	Western Pacific Agent	<i>cri-mel A</i>
1	7	Our Very Own	<i>dr A</i>	5	3	Where Danger Lives	<i>com A</i>
2	5	Outcast of Black Mesa	<i>mus-wes AYC</i>	1	4	Where the Sidewalk Ends	<i>mel A</i>
13	2	Outriders, The	<i>mel-c A</i>	6	1	White Tower, The	<i>dr AYC</i>
6	4	Outside the Wall	<i>cri-mel A</i>	7	3	Whipper, The	<i>wes A</i>
2	1	Pagliacci	<i>mus-dr A</i>	5	4	White, Winchester '73	<i>adv-dr AYC</i>
5	4	Palomino, The	<i>wes-c VC</i>	1	8	Winslow Boy, The	<i>doc-dr AYC</i>
2	3	Panic in the Streets	<i>mel A</i>	2	9	With These Hands	<i>mel AYC</i>
7	1	Peggy	<i>com-c AYC</i>	2	9	Wolf Hunters, The	<i>dr A</i>
8	6	Perfect Strangers	<i>cri-dr A</i>	3	4	Woman	<i>com A</i>
4	4	Perfect Woman, The	<i>com A</i>	5	5	Woman of Distinction, A	<i>mel AYC</i>
5	10	Please Believe Me	<i>com A</i>	7	10	Women from Headquarters	<i>doc-c A</i>
1	2	Powder River Rustlers	<i>wes AYC</i>	1	5	World Youth Festival	<i>com AYC</i>
4	10	Quicksand	<i>cri-dr A</i>	1	2	Yellow Cab Man, The	<i>mel-e AYC</i>
3	3	Radar Secret Service	<i>mys-mel AYC</i>	6	6	Young Daniel Boone	<i>mus-dr A</i>
1	3	Range Land	<i>wes AYC</i>	3	4	Young Man with a Horn	
1	5	Rapture	<i>dr A</i>	1	10		

The Consumers' Observation Post

(Continued from page 4)

should also carry adequate warning of the dangers involved in the use of carbon tetrachloride.

* * *

THE BELIEF THAT CANDY CAUSES DENTAL DECAY and that it affects children's nutrition adversely is held by the New Jersey Nutrition Council and a number of other New Jersey state departments and organizations, according to Public Health News. Minnesota health authorities also report unfavorably on the sale of soft drinks and candy bars in the schools. One significant finding brought out by the New Jersey group was that, to prevent tooth decay, teeth must be brushed immediately after eating candy, and there was no opportunity to do this in school. The high sugar content of chewing gum has caused Oregon authorities to frown on its use.

* * *

BEDCLOTHES for the person with an allergy to wool and feathers have been something of a problem in the past. Now part of the difficulty is solved by the use of the new foam-rubber mattresses and pillows. Cotton blankets are available from several sources, and the electric comforter made by Westinghouse Electric Company does not contain any allergenic material, according to the Journal of the American Medical Association. Cotton sheets are not antigenic, but the soap used in washing them may sometimes be a source of trouble.

* * *

SOFT-SOLED "LOAFERS" AND "SNEAKER" TYPE SHOES are ideal for the gymnasium, but they should not be worn generally, advised Dr. William J. Stickel, executive secretary of the National Association of Chiropodists. He warns that "we are developing a foot-sick generation when more formal shoes, which support the arch and the rest of delicate parts of the growing foot, are never worn." Other foot troubles are contact allergies to leather, black and brown dyes, rubber cement, and metal eyelets, reports Dr. Royal M. Montgomery of the



Hurry!

Hurry!

Hurry!

CR's 1950-51 *Annual Cumulative Bulletin* will be off the press the latter part of this month. It is the big 228-page "handbook of buying" that presents a wide range of CR's previous findings in many fields, together with much new information.

Conveniently indexed, it provides a handy reference for looking something up before you make a purchase. It is not included in a subscription, but is available to individuals and their immediate families at the rates shown on the next page. During our busiest season (from now until Christmas), it sometimes takes as long as four weeks to fill an order. We suggest therefore that, if you wish us to mail you a copy of the 1950 *Annual Cumulative Bulletin* as soon as it is off the press, you place your order at once.

Please use the convenient order blank on the next page!

New York Hospital for Special Surgery. Another foot difficulty, "athlete's foot," can be kept in check by good personal hygiene measures, including careful drying between the toes, removal of any dead skin, loose-fitting, frequently changed socks and shoes, and the use of zinc undecylenate (found in the proprietary dusting powder Desenex) between the toes, according to a public health expert. The use of foot baths for preventing infections has been found ineffective.

* * *

DISH TOWELS of rayon-linen or rayon-linen-cotton mixtures were found to retain their whiteness better than towels of all-cotton, all-linen, and cotton-linen mixtures in a study made at the University of Missouri by Adella Ginter and graduate students, Kathryn Gray and Edna Bean. It was also found that absorption was greatest in the rayon mixtures. Other results noted were: all-linen towels and the rayon mixtures were the most expensive; shrinkage was greater in the cotton-linen and in the all-cotton toweling than in the all-linen and the rayon-mixture towels; cotton towels changed most in whiteness. The full title of the study is "A Serviceability Study on Kitchen Towelings of Various Fiber Contents," Research Bulletin 448, University of Missouri, Columbia.

* * *

NEWLY AVAILABLE OR NEWLY TESTED:

Snow Crop Pure Coffee Concentrate Quick Frozen (Snow Crop Marketers Div., Clinton Foods, Inc., 445 Park Ave., New York City) 59c. 5-1/2 fl. oz. This is a concentrated coffee liquid, which when allowed to thaw, is used to make hot coffee by adding one or two teaspoonfuls to a cup of hot water. The resulting flavor was similar to various brands of powdered coffee. It lacked the aroma and other intangible factors that make for quality in a freshly brewed cup of coffee from freshly roasted, freshly ground beans. For iced coffee the product produced a satisfactory drink, partly because it was possible to "step up" the concentration to counteract the dilution by ice cubes, a factor that some makers of iced coffee by the usual method fail to take into consideration. The label claimed that the 5-1/2 ounce jar would make 28 to 34 cups of coffee. From a pound of regular coffee, which will cost about 50 percent more, it is possible to get 35 to 40 cups. Whether there is an actual saving by the use of the frozen product will depend on how strong you like your coffee. Directions which called for one teaspoonful of concentrate to a cup were found to make a hot beverage that was somewhat weak for a number of people who tried it. For making an iced beverage, using the amount of concentrate desired for flavor, it was quite acceptable and most convenient.

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PHONOGRAPH RECORDS

BY WALTER EGRUENINGER

Please Note: In the ratings AA indicates highly recommended; A, recommended; B, intermediate; C, not recommended. Although nearly all new releases of serious music are heard, space narrows comment, generally, to items which merit high ratings.

Bach: Seven Sonatas for Flute and Harpsichord. Caratage and Charbonnier. 4 sides, Vox-Polydor Set LP 6160. \$11.90. Though the musical values are uneven, this is one of the most cherished Bach recordings of the year. Unfamiliar performers, obviously schooled in the great French tradition, play subtly and impressively. Wide range recording, excellent balance, probably a recent tape job done in Paris. The flute stands so close to the microphone, however, that unwelcome breath sound is audible when the volume control is turned up high. Otherwise, remarkable recording.

Interpretation AA
Fidelity of Recording A

Bartok: Forty-Four Duets for Two Violins. Aitay and Kuttner. 4 sides, Period LP 506. \$11.90. An unusual set for the chamber music connoisseur. Short, melodic, rhythmic numbers based on folksong. Played beautifully by violinists who have performed these duets on numerous occasions in Europe. Little pre-emphasis of highs, but balance is good, and sound as a whole is warm and round. Most enjoyable when played a side or two at a sitting.

Interpretation AA
Fidelity of Recording AA

Borodin: Prince Igor — Polovtsian Dances. London Philharmonic Orchestra and Choir under van Beinum & Falla: El Amor Brujo. London Philharmonic Orchestra under Collins. London LP 203. \$5.95. The wild Polovtsian Dances come off better than El Amor Brujo which I have heard played more colorfully. Beecham's performance of the dances in Columbia Set X54 (oldish recording) are more musical than van Beinum's. Recording good though jumbled in the loud passages close to the label.

Interpretation A
Fidelity of Recording A

Franck: Quintet in F Minor. Chiggi Quintet (piano and strings). London LP 201. \$5.95. Although not as frequently played as his symphony and his sonata, this work ranks with Franck's masterpieces in the cyclic style. The Italian performers do not fully convey the subtle French emotion and drama. The first violin's tone is less bewitching than I expected, with plenty of "white" tones. Fine ensemble, moderately well reproduced.

Interpretation A
Fidelity of Recording A

Franck: Symphonic Variations. Casadesus (piano) with the Philharmonia Orchestra under Weldon & D'Indy; Symphony on a French Mountain Air. Casadesus with the Philharmonic-Symphony Orchestra of New York under Münch. Columbia LP 4298. \$4.85. The recording of the piano in the variations sounds muffled whereas the piece overside has been cut with more brilliance. But I hear fuzziness on two sides. Both compositions stand high in the French catalogue. And the soloist and conductor know what they are about, though the New York Philharmonic has played better.

Interpretation A
Fidelity of Recording A

Haydn: Quartet in D ("The Lark"), Op. 64, No. 5. Hungarian String Quartet. 4 sides, RCA Victor Set WDM 1377. \$2.40. A fine work. The performance is a credit to this outstanding European group. The English recording, however, lacks wide range and warmth. Surface noise is present, too. Probably dubbed from the RCA reissued HMV set which may sound better.

Interpretation AA
Fidelity of Recording B

Mozart: Symphony No. 39. Boston Symphony Orchestra under Koussevitzky. 6 sides, RCA Victor Set WDM 1379.

\$3.35. Cheerful music, among Mozart's finest symphonies. Koussevitzky plays with strength, clarity, elegance and a minimum of sentiment. Resonant, dry recording.

Interpretation AA
Fidelity of Recording A

Sammartini: Concerto Grasso (Op. 11, No. 4) & Pergolesi: Trio Sonata & Corelli: Concerto Grasso (Op. 6, No. 9). Vienna Symphony Orchestra under Moralt. Westminster LP 50-9. \$5.95. Lovely, early minor works wisely grouped. Played straight-forwardly in fine ensemble but lacking the polished detail that distinguishes a good performance from a superb performance. Pleasing, close-in recording.

Interpretation A
Fidelity of Recording AA

Schubert: Symphony No. 8 ("Unfinished"). London Symphony Orchestra under Krips. London LP 209. \$4.95. A beautiful two movement work, a favorite with symphonic audiences. This London product is acceptable from all points of view but does not reach the heights of the Bruno Walter and the Koussevitzky recordings.

Interpretation A
Fidelity of Recording A

Schumann: Dichterliebe. Mack Harrell (baritone). 6 sides RCA Victor Set 1387. \$3.35. A great cycle of 16 songs performed with commendable artistry. But the wavering pitch of the piano rules this 45 rpm. set out of serious comparison with the 78 rpm. competition. Moreover, the engineers have not captured the richness of Harrell's big voice.

Interpretation AA
Fidelity of Recording C

Schumann: Fantasiestücke. (Op. 12). Jacqueline Blanckard (piano). London LP 210. \$4.95. Early Schumann — eight impulsive, imaginative, short pieces. Sympathetic performance and warm recording. Unlike a majority of piano recordings on 33 and 45 rpm. disks, this one maintains a steady pitch, with one or two minor exceptions, and never sounds like a vibraphone.

Interpretation AA
Fidelity of Recording A

Songs by Ljuba Welitsch & Two Scenes from Don Giovanni. Columbia LP 2118. \$3.85. Extraordinary singing and clear, realistic recording. The songs are composed by Dargomyjsky, Moussorgsky, Marx, Strauss, etc. An exceptional disk, for the Bulgarian soprano is in splendid voice which is high praise, indeed.

Interpretation AA
Fidelity of Recording AA

Vivaldi: Violin Concerto, E Flat Major, & Violin Concerto, G Minor, Op. 12. Peter Rybar with the Vienna Symphony Orchestra under Moralt. Westminster LP 50-6. \$5.95. "First recordings" of vital concertos of an 18th century composer too little represented on disks. Played robustly, if not with breathtaking finesse. Clear, competent recording.

Interpretation A
Fidelity of Recording AA

Wagner: Parsifal Prelude and Good Friday Spell. NBC Symphony Orchestra under Toscanini. RCA Victor LP 15. \$5.45. Sublime, lofty music — long an outstanding Toscanini interpretation. Hard, weak bass and low volume level recording.

Interpretation AA
Fidelity of Recording B

RECOMMENDED SINGLE DISK

RCA VICTOR: Symphony Orchestra of the Augusteo, Rome, plays the "I Vespri Siciliane Overture" on 49-1143.

50 80